Peggy Daisey Cristina José-Kampfner

The power of story to expand possible selves for Latina middle school students

Middle school language arts and mathematics teachers integrated biographical storytelling about successful Latinas and reflective and affirmative writing with their instruction.

atinos are the fastest growing minority group in the United States and are currently tied with blacks as the largest minority group (Canedy, 2001). Suro (1998) noted that more than a third of Latinos in the U.S. are under 18 years of age. It is estimated that between 2000 and 2020 there will be a 47% increase in 5- to 13-year-old Latinos in U.S. schools (National Center for Education Statistics, 1997). Although the high school dropout rate has declined for Caucasians and African Americans, it is increasing for Latinos. The U.S. Department of Education (1992) reported that the high school dropout rate for Latino youth was 35.3%, in comparison with 12.3% for non-Hispanic Caucasians. Moreover, as many as 75% of Mexican teenage immigrants never attend school (Suro, 1998). Latinas drop out of high school at a far greater rate than any other group of girls: 26%, in comparison with 13% for blacks and 6.9% for whites (Canedy, 2001). Latinas leave school earlier than all other groups of young people, often before ninth grade, and are the least likely to return.

Romo and Falbo (1996), who have studied the school experiences of Latino teenagers, have documented the discouragement and dropout rate of these students, which they attribute to teacher stereotyping, low expectations, and tracking. Latinas face special social and cultural pressures that prompt many girls to leave school without a diploma. Confusion comes from mixed messages from home and school, with often competing values about career, marriage, and motherhood (Canedy, 2001). The Latino Institute

©2002 International Reading Association (pp. 578–587)

Journal of Adolescent & Adult Literacy 45:7 April 2002

(1996) reported that in the Chicago area, for example, just 5.2% of Mexican American, 5.4% of Puerto Rican, and 6.9% of Central American women had bachelor's degrees.

Teachers' attitudes toward gender have a profound impact on their classroom practices. Thus, the need to develop teachers who are conscious of stereotyping represents the most influential element in mitigating this problem (Weller & Reyes, 1983). By changing behaviors, beliefs, and attitudes within the classroom, girls will be encouraged to be confident and successful. Middle school is a critical time in students' lives. At this age most adolescents decide between a lifelong interest or disinterest in education (Simpson & Oliver, 1990). These conclusions will determine their motivation to study, which in turn will affect their later career and personal opportunities (National Council of Teachers of Mathematics, 2000).

Changes in student demographics mean that schools are responsible for teaching a broader variety of students, including those who in the past have been the least well served by the educational system. Thus, educators are urged to have a new vision of instruction. "In this view, the task of teachers and schools is not to detect and remediate students' deficits, but rather to identify and nurture sources of competence in students" (Silver, Smith, & Nelson, 1995, p. 11). Educators may provide rich learning experiences for diverse populations by contextualizing study within the social and political interests of minority students. Otherwise, education likely will remain a pursuit of the elite (Secada, 1991).

The needs of Latinas at an urban middle school

The Academy of the Americas, part of the Detroit Public Schools in Michigan, serves low-income families who are recent immigrants from Mexico and Puerto Rico. The majority (97%) of the students are bilingual; 78% are eligible for free or reduced-cost lunch. State mathematics and writing scores are among the lowest statewide. The Academy of the Americas is a "school of choice": Students apply for admission. The school's mission is to prepare students academically for successful futures while celebrating their culture and heritage. At the beginning and end of the school year, middle school students were asked to "Draw a Latina at Work." In this way, they could suggest the female role models in their

lives. The 150 drawings emphasized the critical need that these young people have for mentors. In the drawings, 72% of students depicted women working in factories or doing domestic work, 18% showed women doing clerical work, and 8% portrayed women as teachers. There was one picture of a Latina as a principal and two of a famous Latina pop singer. Stereotypes abounded in the drawings: Women were portrayed as wearing high heels and heavy eyeliner, and having shapely bodies and long hair; their jobs included picking fruits and vegetables, serving others in their homes, or performing unskilled work in factories. See Figure 1.

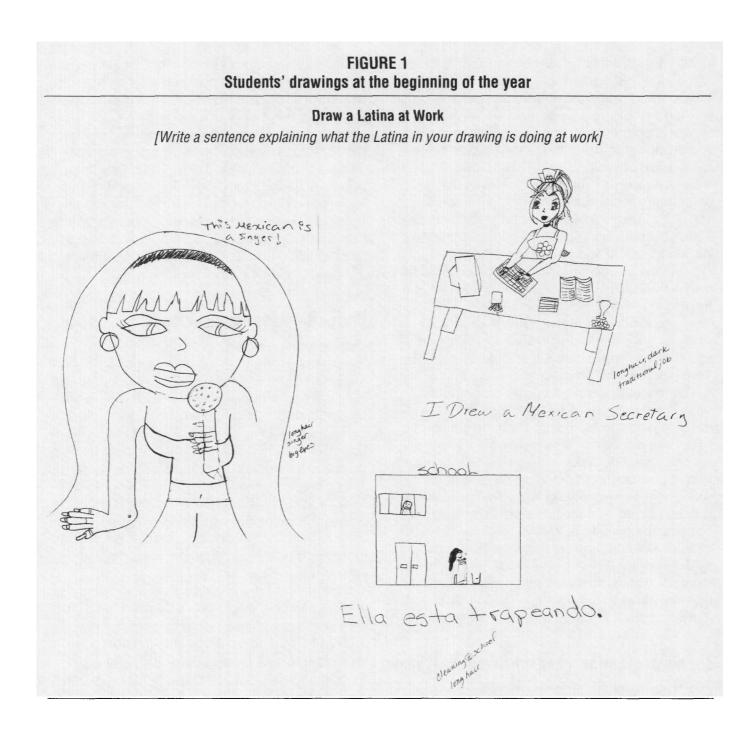
Professional development model

Throughout a school year, five middle school teachers of Latino students (two mathematics teachers and three language arts teachers), as well as teacher educators and university faculty who taught English, Spanish, educational psychology, content area literacy, and mathematics, worked together in sustained workshops combining mathematics instruction, diverse forms of writing, and storytelling about successful Latinas. The 5-step learning cycle (Atkins & Karplus, 1962; Biological Science Curriculum Study, 1994) was used to integrate biographical storytelling, mathematical exploration, discussions of gender and bilingual issues, and writing (see Figure 2).

One intent of the project staff was to enhance the instruction of teachers of Latinas to build student self-esteem through expanding the range of available role models. Peggy (first author) collected biographies of Latinas, particularly those who were mathematicians. Teachers and Cristina (second author) practiced biographical storytelling during the workshops and then told or reenacted the stories biweekly for students. In one instance during the year, students also told a story. Language arts and mathematics teachers and students greatly enjoyed the storytelling, and their dramatic talents bloomed in their presentations.

Rationale for middle school biographical storytelling with Latinas

Heath (1980) believed that literate behaviors can lead to the creation of new worlds of possibilities.



This is because students can stand only as tall as the stories that surround them (Taylor, 1996). Egan (1992) encouraged secondary teachers to use story in their instruction. Daisey (1997) described the benefits of including biographies in secondary science and mathematics instruction to include the promotion of construction of knowledge, vicarious experiences, positive attitudes toward instruction, and emotional growth. Through the inclusion of

reading and oral storytelling of biographies of Latinas, middle school teachers have an avenue to send powerful messages while teaching content material to students who are underrepresented in mathematics-related fields (Clewell, Anderson, & Thorpe, 1992). Banks (1989) believed that teachers may help to empower students by teaching them decision-making and social action skills. Biographical storytelling of successful Latinas is

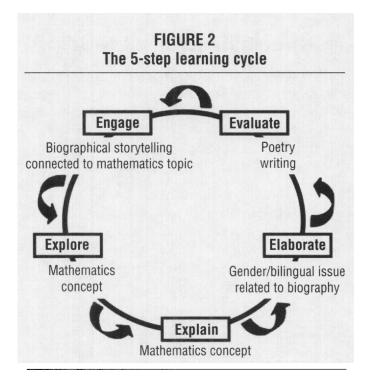
Journal of Adolescent & Adult Literacy 45:7 April 2002

helpful in this regard. This is because through biographies students may realize that "what seemed simply the way things are, could actually be a social construct, advantageous to some people and detrimental to others, and that these constructs could be criticized and changed" (Taylor, 1996, p. 126). Biographies help students understand that things can be other than they are, thus providing them with expanded possibilities and the ability to imagine new stories and endings for themselves. If students have no sense of their lives having a story, they are unlikely to act purposefully during adolescence to pursue their goals (Kerr, 1994). A biography "can open unexpected doors or permit unanticipated guests to enter our lives" (National Storytelling Association, 1994, p. 55).

During a story, students are engaged in the tales of others experiencing dilemmas similar to theirs, which can cause them to ask, "What would I do if ...?" While students reflect "and this question...hangs in the air, who [they] are is up for grabs" (Taylor, 1996, p. 42). This is the moment when students begin "developing the ability to choose rather than simply to inherit a story" (Taylor, 1996, p. 137). Teenagers appreciate biographies because they are busy trying to figure out the plot and theme of their own lives and are eager for hints. Through the inclusion of diverse biographies, teachers are encouraged to have visions of their students that the students may not yet have of themselves. Moreover, teachers are reminded that no research has ever shown that high standards and expectations of students have caused an increase in the high school dropout rate (Matthews, 1988).

Silver et al. (1995) believed that "most children, even early adolescents, enjoy having someone read stories to them" (p. 42). Teachers who have included storytelling in their instruction are impressed at its power. As one sixth-grade teacher explained,

Many teachers think that storytelling will take out of class time, but it doesn't. It is part of your lesson, and makes the actual lesson much more powerful. By about the third time that I start my sixth grade class by saying "I'm going to tell you a story"; they'll settle down and listen.... I don't have to fight for their attention. I've got it. Even when I get to the academic part I don't lose them. And their retention of the stories is amazing. Even not the



particularly dedicated students will remember those stories and at the end of the year they are still referring to them. (Hamilton & Weiss, 1990, p. 1)

Beyond its relevance to the culture of childhood, storytelling is also an important feature of the oral tradition of many cultural groups (Silver et al., 1995). Mexican and Central and South American storytellers of Indian, Spanish, Aztec, and Mayan descent have passed on *cuentos* (tales) by word of mouth for centuries, because many people are not able to read or write. Cristina recalls that in her Mexican hometown people sit around the plaza telling stories. Older generations pass on their knowledge and history through stories rich in language and metaphor. Often there is a moral in these stories. In this tradition, storytellers assume a response of affirmation from their audience (Leeming & Sader, 1997). Studies suggest that female (Belenky, Clinchy, Golderger, & Tartule, 1986) and Latino students (Ramirez & Castanda, 1974) respond positively to knowledge that is presented in a humanized or story format. Thus, Ladson-Billings (1994) believed that teachers with culturally relevant practices, like wise men, "travel a different route to ensure the growth and development of their students" (p. 15).

Two representative biographical storytellings

Story number 1. Hermelinda Renteria was born in Mexico to migrant farm workers. She was one of four children. Her family moved to California when she was young, and she attended private Catholic schools. When she graduated from high school, she returned to Mexico and was one of three women to receive a B.S. in engineering from the University of Guadalajara. It took several attempts to find a job where she was allowed to supervise work in the field, rather than to do paperwork indoors. She believed that she did not have difficulty as a Latina in the workplace, but as a female (Bernstein, Winkler, & Zierdt-Warshaw, 1998).

The teachers' dramatic interpretation of this biography. One of the female language arts teachers was the story's narrator. A female mathematics teacher played the part of Hermelinda at her first job. She sat at a desk next to the workshop's coffeepot and worked on construction paperwork. Two male teachers (one mathematics and the other language arts) pretended to be construction engineers who were there to meet the company's construction engineer for the first time and did not realize that she was female. The two of them stereotyped Hermelinda as a secretary and asked her for some coffee. Hermelinda had the task of introducing herself. In the second scene, Hermelinda was now at a later job where she supervised construction outdoors. The two male teachers played the role of construction workers (props included construction hats and a long pole for surveying). Hermelinda, clipboard in hand, approached the workers and began to give them instructions. The response from the male workers included catcalls and whistles. Hermelinda reported the two workers. The supervisor (a female language arts teacher) called in the two workers and explained that Hermelinda was the field construction engineer. The two construction workers expressed their surprise and explained that they had never had a female supervisor before, but would learn to work with her in the future.

Student and teacher reaction to the biographical storytelling. Students said that they admired their teachers "for risking their reputations and making fools out of themselves to tell them a story." The Latinas in the class were pleased that Hermelinda

Renteria stood up for herself. Both male and female students commented that they knew that sometimes women were disrespected and not treated as equals (see Martinez, 1998). Despite this admission by students, the teachers (back in the workshop) lamented the tight clothing and abundance of make-up that some girls wore. One teacher said that he did not allow lipstick in his mathematics classroom. A sixth-grade language arts teacher described her discussion with students about how looks can be deceiving when they read the book Belle Prater's Boy (White, 1998) in her class. This story afforded students the opportunity to compare the characters, Gypsy, who was considered beautiful, and her crossed-eyed cousin Woodrow. A few Latinas suggested that they knew what it was like not to be beautiful and described the stereotyping and name calling they endured because they were overweight. This teacher noted that she believed sixth-grade students were searching for their identity. She was an advocate of forms of poetry such as "Es Verdad que" (It is true that), in which students wrote the sentence starter "Es Verdad que" 10 times and then finished the sentences with characteristics about themselves. Through writing, students were given an avenue for self-reflection and affirmation (Marzan, 1997).

Teachers thought the Hermelinda story taught students to be mindful of the pain that stereotyping and disrespect brings to others. An opportunity for students to write "I AM" poems (see Figure 3) provided new insights for personal change and social action. The poems afforded students an opportunity to reflect on how to change their weaknesses into strengths, to overcome society's pressure on them, and to create a positive proclamation about themselves.

I AM

- I am the joy that comes out from the chirps of birds.
- I am the light that makes me look radiant.
- I am the creativity that makes me do my own things.
- I am temperate so that my thermometer never goes below zero.
- I am the good-hearted, the reason that Valentine's Day is my own holiday.
- I am the forbearance that made me walk when I was small.

I am the brilliance that Albert Einstein had.
I am the thrill that comes from children when they hear the bell ring for recess.

Mayra Enriquez (eighth grader)

Story number 2. Cristina (second author), a bilingual Mexican American, told this story to several mathematics and language arts classes as if she were Cleopatria Martinez. Cleopatria was born in New Mexico to poor parents. She grew up in housing projects in Denver. Her family was eligible for welfare payments and free lunches at school. She was raised by her mother, who had a third-grade education. Cleopatria had a younger brother and sister. When her mother was working, she had to make sure they did their homework and chores. Sometimes her mother did Cleopatria's chores for her so she could do extra homework. In school, teachers had low expectations of Mexican American students. Cleopatria's family was so poor, she remembers, that her goal was to reach the poverty line. Despite little encouragement, she was a good student and wanted to succeed. She liked mathematics best of all, because she found if she followed the rules she would get the right answer, no matter what the teacher thought about her. She kept going with her education. She decided that "when I hit that brick wall, I'd...let the wall stop me, rather than just stopping myself before I'd even tried." She felt she had to work twice as hard in college to prove herself. She was very persistent. Today, Cleopatria has a Ph.D. in mathematics from the University of Colorado, Boulder, and is a professor of mathematics at Phoenix College, Arizona. Her advice to young people is "if you have a dream, you have the ability to make it come true...and don't let anybody tell you differently" (see http://www. sacnas.org/bio/martihig.html).

Student and teacher response to the story. Students were able to relate to Cleopatria's life experiences. One student noted that when she went to a different school, her teacher often reminded students that Mexicans were poor and did not do well in school. Perhaps due to perpetual low expectations, one student said that she did not know that a Latina could be a mathematics professor. In contrast, another student said that she had a neighbor whose daughter went to medical school. Cristina discussed with students the idea that Cleopatria Martinez should not

FIGURE 3 I AM poem format

Line

- 1 lam
- 2 Three nouns about which you have strong feelings. Begin each with a capital letter.
- 3 A complete sentence about two things that you like.
- 4 Three nouns that describe what you like to see in other people; end with "are important to me."
- 5 A sentence containing a positive thought or feeling. It can tell you what you find acceptable in yourself.
- 6 (Continue line 5)
- 7 Sentence in which you show something negative in yourself or others; however, the sentence must end by showing that out of something bad can come good. Use the word but to link the bad and good.
- 8 (Continue line 7)
- 9 Each line is a short sentence relating something about which you have strong feelings—likes or dislikes. They do not have to relate to each other or to the previous lines you have written.
- 10 End with "This is me" or "I am."

see http://members.tripod.com/the_english_room/poetry/30_days_of_poetryday_8.htm.

be looked upon as an exception, but as a norm. A mathematics teacher (in the workshop) described another opportunity she had to discuss "the norm" when students told a story, "The King's Foot" (Lipke, 1996). In the story a king asked a female carpenter to build a stable for him. The king assumed the stable would be a certain size, because his foot was expected to be the standard of measurement. However, the carpenter's foot was smaller. Because that was used, the king ended up with a smaller stable. The point of the mathematics lesson was that although it did not matter what the standard of measurement was, it was necessary to agree what the standard should be. The teacher used this analogy to provoke students' critical thought about other assumptions made about what they consider the norm and what expectations they

had for themselves in mathematics instruction. Because encouragement was common from this teacher, students said that they knew they needed to study harder, that the teacher was trying to inspire them to be better, and that education was key to their future success.

Students had a lot of questions and thoughts about welfare and poverty when they heard the Cleopatria Martinez story. One student believed that a person on welfare could be made to leave the country. The students wanted to know what the poverty line was. Cristina explained to the students what this was and listened to the students' experiences of living in poverty. For instance, one student remembered that in the town (in Mexico) where he was from everyone was poor, but the people who owned chickens were thought to be better off. Cristina thought that it took very little to move up the scale of prosperity when one had so little. All the students talked about not having enough money for this or that and how it was a regular occurrence to have to wait for their mother or father to be paid to get what they needed.

The sixth-grade language arts teacher (in the workshop) described a story entitled "Eleven" written by Sandra Cisneros (1992) in which a thoughtless teacher, perhaps similar to ones Cleopatria Martinez experienced, embarrassed and rendered a Latina voiceless on her 11th birthday (see Kevane & Heredia, 2000, for interviews of Latina authors, and McCracken, 1999, for an analysis of Latina fiction). Relatedly, this teacher also noted the discussion she had with her students when they read *Letters From a Slave Girl: The Story of Harriet Jacobs* (Lyons, 1992) about how difficult it is to be a woman sometimes and the hard choices that women like Harriet had to make in order to save themselves.

Biopoems (see Daisey, 1996–1997, for formula) were a favorite writing assignment because they afforded students an opportunity to reflect upon Cleopatria's struggle and to affirm her achievements.

Cleopatria

Intelligent, brave, successful professor who loved family, school, and reaching her goal who experienced happiness, sadness, and love Who feared nothing

Who accomplished being a mathematician Cleopatria wanted not to be discriminated against

Phoenix, Arizona Martinez Rita Murillo (sixth grader)

The story was valuable because it gave the inservice staff insights about these students' prior knowledge that could make mathematics instruction relevant. It reminded the staff that we all live different realities. Students' prior knowledge needs to be assessed, respected, and integrated with instruction. The two mathematics teachers thought that this biography would be a good introduction to the study of data analysis and that they could bring in statistics and charts relating to the poverty line. A language arts teacher thought he would use a brick as a prop when he told this story to students, and he'd keep it on his desk to remind students not to give up on themselves when they faced a brick wall but to be like Cleopatria.

Draw a Latina at Work end-of-the-year results

Biographical storytelling appears to have provided more role models for students. Their end-of-year drawings showed considerable change and expansion of occupations for Latinas. Interviews with students revealed that they did not realize they could aspire to the careers and lives presented in the biographical stories. Although it is a long road from grasping the idea of the possible to reaching that goal, it seems no small task to have Latino middle school students realize what is possible for them.

The eighth-grade class suggests the power of story to make a difference in Latinos' thinking. The teachers frequently described the challenge this group of students had presented in every grade. Despite the teachers' efforts, "nothing sunk in." Moreover, every year there was a career day, when Latinas in different professions came to the school and made dynamic presentations. In addition, students experienced literature with many strong minority fictional characters in stories in the sixth-grade language arts class. There were many posters in classrooms and hallways that showed famous Latinas in diverse careers. Even after 2 years, all of this did not seem to be enough to influence the eighth graders when they drew their Latina at work at the beginning of the year, but

experiencing a year of biographical storytelling made a remarkable difference in their later drawings (see Table).

The sixth-grade mathematics teacher noted the "light bulbs that came on" during storytelling. She explained that for many students their role model was their mother, and when stories were presented they realized there were more choices. This bilingual mathematics teacher believed she was a role model for Latina students and described hearing Latinas talk about how their teacher had a career and a family. She shared that some Latinas realized they did not need a boyfriend right away. This teacher was aware that one encouraging comment from a teacher could change the life path of a student, yet she feared that many girls would be overcome by the pressure to conform to society's expectation of them and drop out of school before graduation.

Storytelling as reclamation

The work of women at all levels deserves respect. Stereotypes do not enhance Latinas' life chances and are a heavy burden. The beginning-of-the-year drawings of custodians (*trapeandos*), secretaries, and singers suggest the words of Clarisa Pinkola Estes, a Jungian psychoanalyst and *cantadora* (keeper of stories), about the need for girls and women to shake off restrictive stereotypes. In her book *Women Who Run With the Wolves: Myths and Stories of the Wild Woman Archetype* (1992), she described the Wild Woman, who reclaimed her health and self "to rise with dignity" (p. 11). The Wild Woman, according to Estes (1992),

lives among queens, among *campesinas* [workers in the fields], in the boardroom, in the factory, in the prison, in the mountain of solitude. She lives in the ghetto, at the university, and in the streets. She leaves footprints for us to try for size. (p. 12)

Most women whom Estes has counseled are "searching for a clue, a remnant, a sign" (p. 6) that the Wild Woman still lives within them and that they "have not lost their chance" (p. 6) for self-reclamation.

Estes (1992) explained that through storytelling within the family tradition, in the *cuentista* tradition, she learned that

Students' drawings of Latinas at work		
	Pre sixth and eighth grade	Post sixth and eighth grade
Factory/domestic/ migrant worker	72%	13%
Semiskilled worker (e.g., secretary or clerk)	18%	13%
Professional/ technical worker (e.g., teacher, scientist)	8%	70%
Pop singer	2%	4%

there is what is called *La invitada*, "the guest." That is, [there is an] empty chair...present at every story-telling time in one way or another. Sometimes during the story, the soul of one or more of the listeners comes and sits there, for it has a need. (p. 510)

In the old and integral healing rites germane to *curanderisma* (see Trotter & Chavira, 1997), "every detail is weighed very carefully against the tradition: when to tell a story, which story, and to whom, how long and in what form, what words, and under which conditions" (Estes, 1992, p. 505). In this way, storytelling is a healing art rather than entertainment. The Latinas pictured in the students' drawings at the beginning of the year showed that the self-image of too many of these young people needed restoration.

The stories of Hermelinda Renteria and Cleopatria Martinez suggest to Latinas their possible selves. This is because these stories are examples of women who were determined to be themselves, free of stereotypes. At the end of the day these women were fatigued from "satisfying work and endeavors, [and] not from being shut up in too small a mindset, job, or relationship" (Estes, 1992, p. 6). La invitada chair was occupied during the telling of these stories; thus, these students were afforded an avenue to consider where they have been, where they were, and where they might go during their lives. Biographical storytelling promotes critical thinking, which may lead to changing detrimental social constructs (Taylor, 1996).

Poetry offered Latinas a mirror to consider their present and future possible selves. Susan Goldsmith Woolridge in her book *Poemcrazy: Freeing Your Life With Words* (1996) described the value of writing poetry,

I can't stand to lose anything. That's part of what all this writing is about for me.... It's hard for me to see myself. When I put words on paper, in poems, in journals, there's evidence I exist. Here's my beauty, my vanity, fear, joy, loneliness. Me. If I put words in poems, I can begin to see my value. (p. 200)

Latinas at the Academy of the Americas, as Taylor, Gilligan, and Sullivan (1995) found with the girls that they observed, are ready to re-envision their futures. Yet, as Weiler (2000) observed in her work with Latinas, contradictions remain in the struggle to define gender boundaries. She wrote that "girls can both offer critical insights on women's oppression and at the same time behave in ways that perpetuate male domination" (p. 130).

The messages teachers send about their expectations of students during instruction are critical. Students learn more in mathematics class than mathematics and more in language arts class than language arts. "Educators are charged with making pluralism work.... The longevity of the oral tradition is a testimony to the power of the told story" (Heckler & Birch, 1997, p. 8). A good story works because it holds and moves the listeners, even as it re-creates them by showing them more about themselves than they knew before. Story helps students to keep in touch with, understand, and articulate the real world around and within them. By taking a different path and including story in middle school instruction, language arts and mathematics teachers of Latinas may present "the recreative properties of the story itself and its importance in [their] psychic survival" (Leeming & Sader, 1997, p. 7). Writing enhances student dignity (Worsley, 1989). Bilingual young people face many challenges in their education (Zentella, 1997). Aurora Levins Morales, a poet, explained her hope for these teenagers, "I am new. History made me. My first language was spanglish. I was born at the crossroads and I am whole" (cited in Gonzalez, 1996, p. 71).

Daisey and José-Kampfner teach at Eastern Michigan University (Teacher Education, Porter 313, Ypsilanti, MI 48197, USA).

REFERENCES

- Atkins, J., & Karplus, R. (1962). Discovery or invention? *The Science Teacher*, *29*, 45–51.
- Banks, J.A. (1989). Multicultural education: Characteristics and goals. In J. Banks & C. Banks (Eds.), *Multicultural education: Issues and perspectives* (pp. 2–26). Boston: Allyn & Bacon.
- Belenky, M., Clinchy, B.M., Goldberger, N.R., & Tarule, J.M. (1986). Women's ways of knowing: The development of self, voice, and mind. New York: Basic.
- Berstein, L., Winkler, A., & Zierdt-Warshaw, L. (1998). *Latino: Women of science—biographies, experiments, and hands-on activities.* Maywood, NJ: People's Publishing Group.
- Biological Science Curriculum Study. (1994). *Investigating limits and diversity*. Dubuque, IA: Kendall-Hunt.
- Canedy, D. (2001, March 21). Often conflicted, Hispanic girls are dropping out at high rate. *The New York Times*, pp. 1, 20.
- Cisneros, S. (1992). *Woman hollering creek and other stories*. New York: Vintage.
- Clewell, B., Anderson, B., & Thorpe, M. (1992). Breaking the barriers: Helping female and minority students succeed in mathematics and science. San Francisco, CA: Jossey-Bass.
- Daisey, P. (1996–1997). Promoting literacy in secondary content area classrooms with biography projects. *Journal of Adolescent & Adult Literacy*, 40, 270–278.
- Daisey, P. (1997). Promoting equity in secondary science and mathematics classes with biography projects. *School Science and Mathematics*, *97*, 413–418.
- Egan, K. (1992). *Imagination in teaching and learning: The middle years*. Chicago: University of Chicago Press.
- Estes, C.P. (1992). Women who run with the wolves: Myths and stories of the wild woman archetype. New York: Ballantine.
- Gonzalez, R. (1996). *The fire in our souls: Quotations of wisdom and inspiration by Latino Americans.* New York: Penguin.
- Hamilton, M., & Weiss, M. (1990). *Children tell stories: A teaching guide*. Katonah, NY: Richard C. Owen.
- Heath, S.B. (1980). The functions and uses of literacy. *Journal of Communication*, 30, 123–133.
- Heckler, C., & Birch, C. (1997). Building bridges with stories. In M. Leeming & M. Sader (Eds.), Storytelling encyclopedia: Historical, cultural, and multiethnic approaches to oral traditions around the world (pp. 8–15). Phoenix, AZ: Oryx Press.
- Kerr, B. (1994). *Smart girls two*. Columbus, OH: Ohio Psychology.
- Kevane, B., & Heredia, J. (Eds.). (2000). *Latina self-portraits: Interviews with contemporary women writers*. Albuquerque,
 NM: The University of New Mexico Press.
- Ladson-Billings, G. (1994). The dreamkeepers: Successful

- teachers of African American children. San Francisco: Jossev-Bass.
- Latino Institute. (1996). *Latinas in Chicago: A portrait.*Chicago: Latino Institute Communications Division.
- Leeming, M., & Sader, M. (Eds.). (1997). Storytelling encyclopedia: Historical, cultural, and multiethnic approaches to oral traditions around the world. Phoenix, AZ: Oryx Press.
- Lipke, B. (1996). Figures, facts & fables: Telling tales in science and math. Portsmouth, NH: Heinemann.
- Lyons, M. (1992). Letters from a slave girl: The story of Harriet Jacobs. New York: Atheneum.
- Martinez, E. (1998). De colores means all of us: Latina views for a multi-colored century. Cambridge, MA: South End Press.
- Marzan, J. (Ed.). (1997). Luna, Luna: Creative writing ideas from Spanish, Latin America and Latino culture. New York: Teachers and Writers Collaborative.
- Matthews, J. (1988). *Escalante: The best teacher in America*. New York: Henry Holt.
- McCracken, E. (1999). *New Latina narrative: The feminine space of postmodern ethnicity.* Tucson, AZ: The University of Arizona Press.
- National Center for Education Statistics. (1997). *The digest of education statistics*. Washington, DC: Author.
- National Council of Teachers of Mathematics. (2000). *The principles and standards for school mathematics*. Reston, VA: Author.
- National Storytelling Association. (1994). *Tales as tools: The power of story in the classroom.* Jonesborough, TN: The National Storytelling Press.
- Ramirez, M., & Castanda, A. (1974). *Cultural democracy, bicognitive development and education*. New York: Academic Press.
- Romo, H., & Falbo, T. (1996). *Latino high school graduation: Defying the odds.* Austin, TX: University of Texas Press.
- Secada, W.G. (1991). Evaluating the mathematics of education of LEP students in a time of educational change. In *Proceedings of the National Research Symposium limited English proficient issues: Focus on evaluation and mea-*

- *surement* (Vol. 2, pp. 209–256). Washington, DC: Office of Bilingual Education and Minority Languages Affairs, U.S. Department of Education.
- Silver, E., Smith, M., & Nelson, B. (1995). The QUASAR Project: Equity concerns meet mathematics education reform in the middle school. In W.G. Secada, E. Fennema, & L.B. Adajian (Eds.), *New directions for equity in mathematics education* (pp. 9–56). New York: Cambridge University Press.
- Simpson, R., & Oliver, J. (1990). A summary of major influences on attitude toward the achievement in science among adolescent students. *Science Education*, 74, 1–18.
- Suro, R. (1998). Strangers among us: How Latino immigration is transforming America. New York: Alfred Knopf.
- Taylor, D. (1996). The healing power of stories: Creating yourself through the stories of your life. New York: Doubleday.
- Taylor, J., Gilligan, C., & Sullivan, C. (1995). Between voice and silence: Women and girls, race and relationship.Cambridge, MA: Harvard University Press.
- Trotter, R.T., & Chavira, J.A. (1997). *Curanderismo: Mexican American folk healing* (2nd ed.). Athens, GA: University of Georgia Press.
- U.S. Department of Education. (1992). *Dropout rates in the United States: 1991*. Washington, DC: U.S. Government Printing Office.
- Weiler, J. (2000). Codes and contradictions: Race, gender, identity, and schooling. Albany, NY: State University of New York Press.
- Weller, L., & Reyes, L. (1983). Stereotyping: Impact on teachers and students. *Action in Teacher Education*, *3*, 1–7.
- White, R. (1998). *Belle Prater's boy*. New York: Yearling. Woolridge, S. (1996). *Poemcrazy: Freeing your life with words*. New York: Three Rivers Press.
- Worsley, D. (1989). The dignity quotient. In P. Connolly & T. Vilardi (Eds.), *Writing to learn mathematics and science* (pp. 276–282). New York: Teachers College Press.
- Zentella, A. (1997). *Growing up bilingual*. Malden, MA: Blackwell.