Ron Sass Inducted into Texas Hall of Fame for Science, Mathematics and Technology

Dr. Ron Sass, Center for Education Codirector and Harry C. and Olga Keith Wiess Professor of Natural Sciences at Rice University, was inducted into the Texas Hall of Fame for Science, Mathematics and Technology on January 20, 2003. Dr. Sass and seven other inductees this year were recognized for their excellence and role as pioneers in their fields. This year’s inductees included Dr. Norman Hackerman, President Emeritus of Rice University, and member of the Center for Education Advisory Board.

The Texas Hall of Fame for Science, Mathematics and Technology is a tribute to the "giants" who have shaped our world through their innovative use of science and its applications. The Texas Hall of Fame recognizes those Texans who are premier achievers in the many fields of science, mathematics and technology and serve to inspire young people to step up to the challenges of our global society. This year’s inductees join the 37 other members already honored by the Texas Hall of Fame for Science, Mathematics and Technology since 2000.

School Literacy & Culture Project and William Smith Head Start Share $425,000 TEA Grant

Helen Wright, Executive Director of the William Smith Tri-County Child Development/Head Start Council; Mariette Bellamy, Director of Child Development and grant author; and Bernie Mathes, Director of the School Literacy and Culture Project, celebrate the $425,000 award from the Texas Education Agency to bring the Classroom Storytelling Project to all the Head Start and some additional classrooms in Fort Bend ISD.

Building Communities of Trust

By Linda McNeil, Codirector

The Center for Education’s role in building trust in schools is the theme of this issue: Creekmore lecturer Deborah Meier’s message that children can trust teachers who have real authority to think and to use their judgment in their teaching; parents trusting teachers to expand their children’s worlds; student writers trusting their peers with their words; young children trusting teachers with their stories, and teachers trusting the Center for Education to connect them to good research, community support and each other.

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Deborah Meier Talks About “Building Trust in Schools” for the 2003 Creekmore Symposium

By Laurie Hammons, Program Coordinator

For more than thirty years, schools founded by Deborah Meier have shown — first in Spanish Harlem and now in a low-income area of Boston — the powerful learning that can take place in small school communities. When the Center for Education chose “Creating Communities of Learning” for the theme of its 2003 Hazel G. Creekmore Memorial Symposium, the choice of speaker was easy; it had to be Deborah Meier. In her teaching, in Central Park East Secondary School and now the Mission Hill School in Boston, and in her fierce advocacy for democratic schooling, Deborah Meier’s work clearly shows that if the school is itself a strong community, children will learn. And the key to a strong learning community, for Meier, is trust. In her Creekmore lecture April 2, 2003 at Rice University, she spoke on “Building Trust in Schools.”

And how do you build trust in schools? Deborah Meier spoke passionately about the importance of trust between parents, teachers, students, administrators, and the community at large. Continuing the discussion she began in her most recent book, In Schools We Trust: Creating Communities of Learning in an Era of Testing and Standardization, Meier outlined the ways that standardization and high stakes tests have reduced, rather than increased, the amount of trust in our educational system. Standardization makes it hard to act on our own best judgment. Students need to see teachers making good choices about curriculum. They need to see their teachers adjusting a lesson that is not working, or adding lessons that are topical and timely. They need to see their teachers working to make knowledge more accessible to the different learning styles in the class. When teachers don’t have the intellectual authority to make these choices, kids know. If kids hear teachers saying, “I don’t think this is a good lesson (or textbook or test), but they tell us we have to do it,” they get the message that it’s okay to compromise one’s own values, that it’s okay to go against best professional judgment. And they learn from that message that they can’t trust their teacher to always act wisely on their behalf. For Meier, the people who know a child the best -- parents, teachers, principals -- should be the ones making the important decisions -- not legislators - - so kids can learn from adults who are, in every sense of the word, responsible, trustworthy.

The small schools that Deborah Meier created have demonstrated how this can work. In public schools of 200 to 300 students, with 15 to 20 faculty members, teachers have been able to create the kind of setting which supports getting to know kids and parents, creating together a meaningful curriculum and assessment system, and near-miraculous success in graduating kids and sending them to college. At both Central Park East and Mission Hill schools Meier and her colleagues show that small schools can be accessible, intergenerational communities. The impact on students is evident. In such a situation students are able to see their teachers work through problems, helping them learn what it means to be a grownup, and building respect for their teachers.

Meier also spoke to an invited group of Houston area educators on the importance of empowering teachers so that they have the authority as a faculty to make decisions about what is important in a school: what is taught, how the school is governed, how the faculty and parents come together on behalf of the children.

Building a strong circle of support within the community empowers teachers to make these necessary decisions. Meier stated, “I want a school where parents and teachers have sufficient authority over the stuff that counts so that they...
How Do We Create Communities of Learning?
Deborah Meier Speaks About Schools and Democracy

The following quotes are excerpts from Deborah Meier’s presentations at April 2-3, 2003 at Rice University for the Creekmore Symposium. An untiring and feisty advocate for children, teachers and democracy, she touches on many of the issues confronting public education today.

Importance of Grownups in Schooling
The kind of education needed today cannot be gotten without [the company of] grownups that are thinking about big, important things. Up until recent times, 99.9% of the human species learned everything through relationships. It’s a new idea that if we put a whole bunch of kids in the same room we think we can give one speech and reach them all the same way. It’s not a bad way to pass on unimportant knowledge, but it’s not a good way to pass on important knowledge.

And I think we have lost the heart of what it takes to let young people become grownups; for grownups to show you what it’s like to be a grownup! I don’t want the kids to grow up to be wimps, either. I want them to grow up being strong and feisty — and I don’t want them to do it by fighting me; I want them to do it by emulating me. They need to be surrounded by grownups who represent that kind of intellectual and moral toughness.

The Importance of Learning to Resolve Disagreements
We need to show them [students] what it’s like to argue and come to resolution. They think of arguing as either nasty like on talk radio shows or something families do sometimes when they are about to split up. There’s another kind of arguing. If we all agreed on everything, we wouldn’t need democracy. They have to know what people do when they don’t agree with everything. And they can’t learn it only in a power relationship between teacher and kid. They need to see that in community.

Respect
We can have good public schools. If we want to educate kids, we need to surround them with authority figures they respect. Kids have no good reason to respect adults if those adults don’t respect themselves enough to say, “Listen, you can whine, sit on the floor, have a tantrum, do whatever you want. I think this decision is good for you and we’re going to stick with this.” That doesn’t mean grownups who don’t listen to kids. But in the end, grownups in the school have got to be in a position to make important decisions about children.

Respect for Teachers
If you put together the voices of parents and the voices of teachers in this country, we’re a powerful force! How have we allowed ourselves to be treated as though our voices are so irrelevant in issues of education and in issues pertaining to our own schools? Why would kids look upon us as sources of authority, when the only authority we have is over them?

We once were here before, you know. In the 19th century, we hired teachers who didn’t have much of an education, and in a sense, scripted them. But we didn’t expect much from education then. I mean, if kids stayed in school six, seven years — that was considered a triumph. They went off and learned to read, write, and do a little bit of arithmetic, and that was it. But to assume you can teach serious intellectual skills that way – we know it cannot be done that way. The school can’t teach serious intellectual habits from teachers who are not in a position to make intellectual judgments. That’s what intellectual life is about, it’s about making judgments, about exercising judgment, looking at evidence, and trying to make decisions about it. And we need to do that openly in front of kids; we have to show them how we go about doing that.

Education for Citizenship
[In America, each of us is a member of the ruling class. We need] to know how to persuade, argue, reason across boundaries that separate fellow citizens. As our conception of fellow citizenship expands, both within the US and globally, this task gets to be harder and harder. And it is not a

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Deborah Meier and Bertie Simmons, principal at Furr High School, discuss Deborah Meier’s presentation on April 3 entitled “Creating Communities of Learning.”

PH Lab resident teachers, Mila Bersabal, Wheatley H.S., Peyton Schuller, Reagan H.S., and Mollie Tyler, Austin H.S., talk with Deborah Meier after her workshop on April 3.
Interactive Wolf Workbooks Promote Scientific Inquiry and Analytic Thinking at the Model Science Lab

By Nedaro Bellamy, Associate Director, Model Science Lab

This past fall, teachers and students in the HISD/Rice Model Science Lab had the opportunity to use computer-based interactive workbooks that incorporate Excel spreadsheets, real-time video footage and web-based resources to investigate and analyze wolf behavior. These interactive wolf workbooks were designed to represent scientific information visually, integrate animal behavior objectives and scientific processes, and make science relevant for students. The interactive workbooks encourage inquiry within instruction by using activities that promote analytical thinking, formation and justification of hypotheses, distinction between observations and inferences, and the use of experimental design to understand the roles of wolves within their environment. Using these workbooks, students learn that certain types of questions can be answered by investigations, and that methods, models, and conclusions built from these investigations change as new observations are made. The wolf workbooks are useful tools for understanding the natural world and help show how systems work.

Investigations incorporating the wolf workbooks were conducted to learn about the natural world of the wolf. Wolf communication, postures, social structures, threats to survival, habitat, food webs and reproduction were integrated within the wolf study. The culminating activity provided opportunities for students to debate the issue of wolf reintroduction in areas where they are considered endangered or threatened. Student decisions were based upon the information they learned during their unit of study on animal behavior and organism responses within the environment.

Model Science Laboratory Teachers Present Their Teachings at the National Science Teachers Association Conference

By Nedaro Bellamy, Associate Director, Model Science Lab

Current and previous resident teachers at the HISD/Rice Model Science Laboratory presented workshops at the National Science Teachers Association (NSTA) Conference held in Philadelphia, March 27-April 1, 2003. “Science for All: It’s the Unifying Force” was the theme that motivated Model Science Lab teacher presentations which energized science teachers nationally with innovative ideas for middle level science instruction.

Morgan McKinley, 8th grade teacher at Pershing Middle School, provided instruction for middle level science teachers on lessons he created during his 2002 residency year at the lab. His workshop session, “Quick and Easy Activities on Energy Transformations” provided teachers with inexpensive and fun activities to teach energy concepts such as differentiating among forms of energy, identifying energy transformations in daily living, methods of energy transfer, as well as endothermic and exothermic reactions. Morgan also presented an activity on three-dimensional planetary motion within the National Earth Science teachers Association’s Share-a-thon. An editor of the journal Science Scope spotted Mr. McKinley’s original planetary motion activity. At the editor’s suggestion, Morgan will submit an article for publication within the next few months.
School Science Project Fosters Parent Involvement in Student Achievement

By Alejandra DeGraff, Alex Martinez, Linda Scott, Science Specialists, and Wallace Dominey, Project Director, School Science Project

For the past seven years, the Rice University School Science Project has worked in partnership with Aldine Independent School District to improve science instruction in Aldine schools. As Deborah Meier pointed out in her April 2 Creekmore lecture (see pages 2-3), trust between community and school is an essential ingredient of good schooling. Jayne Fowler, a teacher at Ermel Elementary, agrees and acknowledges that "Ms. Meier reminds us of the respect that each child deserves as well as the trust that I, the teacher, must have in order to teach." Even so, many schools do not foster activities that promote trust. Because of the important relationship of parent involvement with student achievement, the Rice/Aldine Science Collaborative (RASC) schools have developed many activities that promote parent and community involvement. These activities get the parents involved in the students' learning and also foster the kind of trust between school and community that Deborah Meier had in mind.

Trash Bash at Ermel Elementary

Real world experiences and problems can provide opportunities for science instruction and for parental and community involvement. Such was the case at Ermel Elementary where the nearby White Oak Bayou North became the focal point. Ermel's community involvement project began in 2002 with a proposal to the Texas Regional Collaboratives for Excellence in Science Teaching Exxon/Mobil grant program written by Dr. Wallace Dominey, Director of the Rice University School Science Project and Alejandra DeGraff, RASC Science Specialist at Ermel Elementary (The Rice University School Science Project is one of the more than twenty Texas Regional Collaboratives for Excellence in Science Teaching). Ten classes participated in this project to teach students, parents, and community leaders the importance of the water resources in the school neighborhood while learning science in the process! Prior to the clean up day, Ermel classes took field trips to the bayou to study flora and fauna living in this urban ecosystem, to collect water samples for water quality analysis, and to observe the trash that contaminates the water in the Bayou.

Family Science Night at Odom Elementary

Family science nights are great ways to get parents involved in science education. Hands-on science activities are planned so that parents and students can experience science learning together. At Odom Elementary, more than 400 parents and students participated in the 2002 Science Bubble Festival/Family Science Night. More than 20 Odom teachers; RASC science specialists; Linda Scott, the district's Elementary Science Program Director; and Odom’s RASC Science Specialist and festival coordinator, Alex Martinez supervised the 10 bubble stations set up in Odom’s cafeteria.

Parents experienced first hand the ways that bubbles can be used in the classroom to teach science and mathematics and they left with new ideas for children to continue learning at home. Parents seemed to enjoy the activities and to be genuinely surprised to see their children so enthusiastic about learning science!

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Students Share Their Stories at the School Writing Project Readings

By Linda McNeil, Codirector

Every spring the Rice University community has the opportunity to hear the power of words. That power comes to life when students from kindergarten to high school seniors read their own writings. These are students of teachers in the Center for Education School Writing Project. All year, these teachers have worked on their own writing and on helping their students find their voices as writers. At the readings held on April 10 (for elementary and middle school students) and April 24 (for high school students) almost a hundred students read or performed their poems and stories for friends and family at Rice University. Dave Fehling, news anchor for Channel 11, attended the high school readings and taped the performances. The readings are held every spring to showcase the writings of School Writing Project teachers and their students. The writings are then published in Impressions, a yearly publication of the School Writing Project. The following are some of the pieces read by students and teachers at the readings:

**Teaching Life II**

I write with the hum of the air conditioner loud in my ears.
I think of places where we’ve failed . . .
Stories not read, essays unwritten, poems not collected
We are tired of the day to day wake up call
The demands are too great.

Yet, we reach out to one another
Sometimes . . .
In the sharp intake of laughter
A unison of voice—“Bless you” on a sneeze.
The open journal of Friday reads.

You are my students, I am your teacher, imperfect so it seems . . .
And yet there is so much beauty in this room
Smudged eyes, scuffed shoes, unwashed hair
And still the sun shines through closed blinds.

By Terri Goodman, teacher, Bellaire HS

**Teenagers Are an Unfortunate Market**

I like to whine:
you’re such a wench,
living the life of a super ego teenage queen.
hanging out with those who are just like you
it’s like an auto cult:
transportation independence only in reality there is a separation of the classes
and I am one below the masses
unfortunate denied alone

I smile just to keep away those that seem to have compassion
yet it is just for their teenage queen super ego mind to feed.
- to all of you that belong to the teenage world: you ruin the market, don’t let it ruin you.

By Jorge Martinez, 12th grade, DeBakey HS

**Dandelion**

Dandelion is the morning sun
And the drying wheat.
Dandelion is the oatmeal
On the table
And the hot summer heat.
Dandelion is the sunflowers
Down the road
And the pollen on the leg of the bee.
Dandelion is summer
And the corn that the chicken eat.
Dandelion is the latch hook rug
Made out of rags.
Dandelion is the ducks
Down by the pond.
Dandelion is the dead grass
Outside.
Dandelion is
A color all of its own.

By Drew McMillian, 7th grade, Oak Forest ES

Students from Bellaire High School, Chris Doherty, Steven Womack, and Rohan D’Souza performed their own songs at the April 24 School Writing Project High School Readings held at Rice University.
In June of 2002, twenty-two Texas secondary teachers, most of them from the Houston area, traveled to China on a three-week, expenses-paid study tour made possible by the Freeman Foundation, the Rice University/Texas Consortium on Teaching about Asia (RUTCTA), and the Asian Outreach and Global Education program of Rice’s Center for Education (see http://www.ruf.rice.edu/~ctreduc/asiaoutreach.html).

As a condition for eligibility, all of the teachers chosen for the study tour had participated in one of the 30-hour Faculty Development Institutes on East Asia offered by the Texas Consortium on Teaching about Asia over the past two years (for information in these Institutes at Rice, see http://ncta.easia.columbia.edu/states/TX/index.html under “NCTA seminars”).

The participants, selected competitively from a pool of about 70 applicants, were led by two members of the Rice faculty: Dr. Steven Lewis, a specialist in East Asian politics and the Director of Rice University’s Transnational China Project (http://www.ruf.rice.edu/~tnchina/), and Dr. Marshall McArthur, who teaches Chinese language and literature at Rice. Ms. Dee Garza, Coordinator for Asian Studies at Rice, accompanied the group to provide logistical assistance and administrative support.

The teachers began their study tour with an eight-day stay at prestigious Beijing University, where they attended seminars on history, philosophy, art, language, calligraphy and other forms of traditional Chinese culture taught by university faculty. They also visited historic sites in and around the capital, including the famous Yonghe Temple, strongly influenced by Tibetan Buddhism, the nearby Confucian Temple, the Forbidden City, the Summer Palace, the Great Wall, the Bell and Drum Towers, and the Temple of Heaven. They toured the new Sackler Museum at Beijing University and visited several Chinese homes as well.

During the next two weeks the teachers visited a number of other Chinese cities and towns, beginning with Chengde, about 250 kilometers north of Beijing. There they explored the many temples, shrines and holy sites concentrated in and around this famous summer retreat of the emperors of the Qing dynasty (1644-1912). They then travelled to the ancient capital of the Han (206 B.C.E.-220 C.E.) and Tang (589-906 C.E.) dynasties — once known as Chang’an and now called Xi’an (aka Sian) — where they visited museums, tombs, shrines, monasteries and temples, including one of China’s oldest and most famous mosques. During their stay in Xi’an, the teachers were paired with local university students and faculty for dinner, which give them an informal and intimate opportunity to learn.

Professor Zhang of Beijing University presents a certificate to Gloria Dimke, a teacher at Timberwood Middle School, for completing a Chinese Culture Program at Beijing University in Beijing, China.

New Cultural Conversations Fall Seminar

This fall, the Center for Education will host a new teacher seminar in the Cultural Conversations project. This six week seminar, which is open to elementary, middle and high school teachers and administrators, will explore the impact race, culture, and ethnicity have on teaching and learning. The Cultural Conversations Project has been a part of many Houston area schools' professional development since 1997, but this is our first multiple school, multi-grade level seminar. It will be held September 18 - October 23, 2003 in the Student Center at Rice University. Contact Connie Floyd, Cultural Conversations Director, at 713-348-5333 for information on how to join the conversation.
On January 17, 2003 eight visitors walked into DeeDee Kibodeaux’s bilingual prekindergarten classroom. Ms. Kibodeaux, an enthusiastic scribe of children’s stories, got paper and pen and checked the story turn-taking list. Spanish-speaking Emmanuel came to tell his story. He looked carefully at all the visitors and then said, “Can I tell in English?” That’s hospitality in grand four-year-old style.

He didn’t even stop there. One of the visitors was Vivian Paley, a MacArthur “Genius” fellowship recipient and author of eleven books about children. Emmanuel’s story started. “She came to my house to visit, Ms. Paley. Ms. Paley talked with my mom.” The story continued, most of the rest in comfortable Spanish. When it was time to dramatize the story, Emmanuel understood Ms. Paley’s sincere interest in his story. So besides his classmates, Emmanuel asked Ms. Paley if she would help act it out. Of course, she would and did.

The students and visitors were seated and the action began. Emmanuel opened the imaginary door to let Ms. Paley in to speak with his classmate ‘mom.’ He was so pleased with the honor that he clapped his hand on his forehead and fell to the ground.

Though we, at the School Literacy and Culture Project, didn’t fall to the ground, I believe we were as pleased as Emmanuel when Vivian Paley agreed to speak at our annual miniconference. Ms. Paley has insatiable curiosity about the stories, the imaginings, and the ideals that children dictate and dramatize. She began listening in her own kindergarten classroom over 30 years ago and she is still intently and thoughtfully listening in classrooms all over the world. Her enthusiasm is catching, for it leads to reflection on the thoughts of children, our own and our students. Dr. Patsy Cooper brought to Houston that concern for listening to each child over 15 years ago. As Patsy Cooper explained in her introduction to Ms. Paley’s speech the next day, Vivian Paley is an old friend of ours.

“Why? Because beyond race, place, or age, beyond curriculum, state mandates, or even the occasional doldrums of the teaching life, Vivian Paley insists for all of us that teaching is a ‘moral act’ (Paley, 1991), which therefore obligates us – no, privileges us – to create classrooms, which beyond race, place, or age, are ‘islands of safety and sensibility’ (Paley, 1991). Physical safety, of course. But cognitive safety, too, where small children are free to guess, ponder, experiment, muse, theorize, and conclude. And then psychological safety, which means that they are first and foremost free from the fear of exclusion, which in turn, frees them to imagine solutions to other concerns of childhood through conversation and play.”

“We know Vivian Gussin Paley because she is our best hope for our own teaching. In helping us to imagine the possibilities in a teaching life, she is our truest teaching self.”

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Children’s Stories, Lives and Literacy: Lessons from Vivian Paley

By Judy Rolke, Literacy CoDirector, School Literacy & Culture Project

“Let imagination soar, and respect it”
“A reminder of the value and importance (academically) of time to play”
“To integrate play with literacy more”
“Children are first and they need a person who listens, nurtures, and remembers”
“play matters”
“When children are silent, they aren’t learning.”
“Planning themes around what the child is interested in.”
“The essential nature of fantasy play and early childhood literacy to later academic achievement”

“What is the most important thing you learned today?” That is the question that elicited the quotes above. It was asked at the conclusion of the School Literacy & Culture Project’s miniconference, Children’s Stories, Lives and Literacy: Lessons from Vivian Paley.

That January 2003 conference was envisioned as an opportunity for teachers, educational specialists, and children’s program coordinators to come together to share their knowledge and experiences and in that way to be active learners themselves. And people did gather, from all around Houston, Atlanta, New York, Chicago, and even London, England.

There were 19 breakout sessions offered for more than 350 participants. Many of the mentor teachers in the Classroom Storytelling Project conducted workshops on particular aspects of their work in classrooms. Some of the topics were literacy with movement, motion and music; dictating and dramatizing children’s stories; multicultural literature; read alouds and dramatization; writing around the classroom; academic contribution of story telling; group stories; name curriculum; creative writing; fantasy play, story and the ‘bad guy’; fairy tales; assessment; stories in a Spanish-speaking class; story baskets; and building community.

Vivian Paley, the keynote speaker, (see pg.8) conducted a session for school administrators. The discussion related fantasy play within the literacy curriculum with the particular concerns of the administrators.

Lisa Crouch, a teacher at Benavidez Elementary in HISD and her Head Start teacher, Ruth Zamudio, lead a workshop about songs and phonemic awareness at the School Literacy & Culture Miniconference January 18, 2003 at Rice University.

Dr. Patsy Cooper, the founding director of the School Literacy and Culture Project, led a workshop on children who don’t fit in. It considered how teachers can organize classroom life, from curriculum like storytelling to everyday routines, in order that ALL children become valued and valuable members of the group.

Trisha Lee, director of MakeBelieve Arts in London, and Isla Tompsett, their Theater and Education Coordinator, conducted a discussion and showed a video of their work, a development of Vivian Paley’s ideas in England. They have trained older students to take the dictation and direct the dramatization of the younger students’ stories.

The stories from the classrooms that all these people shared stimulated much thought and discussion. Teachers realized the complexity of their jobs and were inspired to keep learning the art of teaching. In the words of two of the participants:

“It takes experience and patience to work appropriately with children.”
“I am a teacher. I want to be better.”
Epistemological Beliefs for Life: Are Classroom Settings for Real Exchanges of Knowledge?

By Judy Radigan

Learning happens fastest when novices trust the setting so much that they aren’t afraid to take risks, make mistakes, or do something dumb. (Meier, 2000, p. 18)

A “setting” that offers this risk-taking opportunity also exposes epistemological beliefs (assumptions about the nature of knowledge and its validation). The nature of knowledge includes how certain the person is about her assumptions (certain/evolving) and how she organizes those assumptions (individual facts/interrelated concepts). The process of asserting knowledge claims includes the sources of the assertions and the way assumptions are justified. Exposing and developing these epistemological beliefs usually comes with the expression of alternate viewpoints that demand both evidence and evaluation. Unfortunately, in two studies of ninth grade English and social studies classrooms (Radigan 2000, 2002), I have found that teachers tend to assert an authority in the classroom that causes students to see the teacher and the text as the single sources of academic knowledge beliefs. Many students then assume that knowledge is composed of certain, linear facts from an expert and that no justification is required. They see knowledge as coming from “somewhere else” not the student. 

Meier discusses the value of providing a “setting” for learners that comprises a multi-age community of learners who expose their own learning processes, revealing their mistake-making and errant paths.
Using their wolf workbooks, students watched computer-generated video clips about dogs and wolves, carefully observing behaviors and analyzing their observations and inferences. Students recorded questions about behaviors they observed within science journals in the interactive workbooks. Wolf behaviors in the wild and in captivity were categorized and compared. The social structures of dog packs were investigated and compared to social structures students were familiar with at school, within the community and at home. Based upon student observations and prior knowledge, hypotheses were created about the social structure of the wolf pack prior to learning new content information about wolves.

At the conclusion of the wolf study, students debated current issues involving wolf reintroduction in areas where wolves are considered threatened or endangered. Student groups enthusiastically debated factors such as threats to farmers, cost to the government, habitat destruction, public opinion, and wolf populations in the United States. Many students were very concerned about the wolf animal population and took positive action. One class collected money to adopt a wolf cub through the World Wildlife Federation. Several students elicited their parent’s assistance and adopted wolf cubs individually. The students understood the role of wolves within the environment and felt a responsibility as citizens of the world to protect them.

The wolf workbooks also provided opportunities for valuable student assessment information for the Model Science Laboratory resident teachers, and, amazingly, it also provided information regarding the status of students’ “family hierarchy” including insights into the emotional health of students. The following resident teacher comment encourages use of interactive workbooks within counseling programs for teens, as well as within science classrooms.

*The wolf program really has the kids excited. They enjoy watching the wolves hunt, play and have puppies. The computer is a nice medium for teacher-student communication- different from the norm. They really responded to the analogy of the school social hierarchy to the wolf pack. Each student had a story to tell about his group of friends and who the alpha dog is – many shared experiences of bullying. Carlos, my challenge student, told a story which helped me understand him. He told a story about his brother at home and how he is the alpha dog. His brother treats Carlos’ mother terribly and intimidates the entire family.*

Former Resident Teachers Crystal Delaney (M.C. Williams Middle School) and George Morrison (Fleming Middle School) provided instruction on photosynthesis and energy interactions within the production of glucose. This session was attended by over 60 science teachers and included alternative assessment ideas, and inquiry methods to promote student understanding of this difficult topic.

Current Model Science Lab resident teachers received enthusiastic interest and potential publication opportunities as they participated in the National Earth Science Teachers Association’s Science Share-a-thon. The content presented by teachers was investigative in nature, encouraged experimental design and promoted alternative assessment options. Shared lessons and activities included the following Earth Systems topics:

- **Hot Spot and Plate Tectonics** (Leslie Benckenstein, Sharpstown Middle School)
- **Wetland Filters** (Tuyen Bui, Bonham Elementary)
- **Composting, Biomass and Decomposition** (Joe Davis, Ryan Middle School)
- **Differential Weathering** (Tramesha Fox, Welch Middle School)
- **Layers of the Earth** (Cynthia Lawrence, Fonville Middle School)
- **Rock Cycle Interactions** (Ann Mitchell, Pershing Middle School)
- **Planetary Cross Sections** (Tonja Parker, Jackson Middle School)

At a time when the quality of middle school science instruction is viewed as a national crisis, the conference provided an excellent opportunity for fostering science teacher professionalism. The following quote from Cynthia Lawrence, a Resident Teacher at the Model Science Lab, sums up the importance of teacher involvement in professional activities:

*It has allowed me to grow both personally and professionally. I had several opportunities to meet new people, learn new ideas to incorporate into my classroom, and learn about new ventures occurring in the professional world of science such as the many newly discovered innovations and ever important technological advances being made daily. I am grateful for this opportunity and cannot wait to share with my students and colleagues!*

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**continued from page 4, Interactive Wolf Workbooks**

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**continued from page 4, Model Science Laboratory Teachers Present at NSTA**
rarely have to say, ‘Oh well, it’s not my fault. I didn’t decide it.’”

The teachers and administrators present pushed Meier to discuss with them ways to gain support for teachers in a state where teachers do not have professional organizations that enable them to speak with a collective voice or to have a role in policy. One teacher stated, “I stand outside my classroom and look down the hall. I realize that most of the best teachers are leaving.” Meier suggested that teachers and parents work together to bring about change, saying, “Reform can’t start from the top. The people at the top are not unhappy!” She urged teachers to keep pushing for what they know are good teaching practices. “The more we give in to the idea we’re not to be trusted, the more distrust will grow.”

task our schools have undertaken. But if we pay no attention to that crisis we can get higher test scores and have moved further away, not nearer, to resolving our society’s desperate needs. It’s easy to go faster, in short, if one doesn’t care where one is going. It’s time for us to ask – where are we trying to take our kids?

Democracy and Trust
[Democracy] presumes differences of opinion and differences of self-interest. It presumes adversarial relationships, that we are going to be sharply in disagreement. But it cannot flourish where basic human relationships have been eroded, where no one trusts anyone. Because it requires the most foolish of all faiths, a leap of faith that we can trust ordinary human beings most of the time.

Habits of Mind
In the schools I’m associated with we use something called Habits of Mind as a definition of using your mind well. (We invented them, and I encourage everyone to invent their own.)

- Evidence: How do you know what you know? Where did you learn it? Is it credible?
- Empathy: What’s your viewpoint, and what are the other viewpoints? Is there another way to look at this?
- Connections: How does this connect to other things within the field, other things you’ve heard about? Is it a pattern? Where does it resonate outside that pattern?
- What if? Could things have been different?
- Who cares? What difference does it make?

Those are our definitions of qualities of mind of educated persons, that will show up in their work over and over again, and in their conversations.

Do We Really Want Schools Run for Profit?
There’s an ideology out there that the best way to run a business is to have low-paid workers, to organize the workforce so that they don’t have to be highly skilled, so you can train them en masse, so you can script them, and that’s fine – they’re more malleable that way, they don’t start getting feisty and think they know something.

No Child Left Behind?
We are living in a time when we are talking a lot about the achievement gap in school, but very little about the gap between the lives that some of our kids live and the lives of others, and what and who determines that kind of policy. The disparities, the gaps in real life between our richest and our poorest kids are greater than they’ve been since I was a child. Nevertheless, there’s no big national campaign to close the real gaps in society. I don’t think anybody noticed a slogan saying “No Family Left Behind.”

On High Stakes Tests in Our Schools
I wouldn’t trust a doctor to make high stakes decisions about my life based solely on a test. If I had done that, several parts of my body would not be here today! I want a second opinion; I want corroborating evidence there was for that, and so forth. And no doctor I know and trust would make a decision based on a single test, even tests far more reliable than we have in the field of education.
The Mad Chemist event is expected to be a great success! Ms. Batiste indicated that her students are very excited to show what they have learned in class about chemistry to their parents.

Teachers participate in the RASC’s teacher mentoring program: Teachers Engaged in Authentic Mentoring Strategies or TEAMS. Teachers Pat Shipley, Caroline Villareal, Stephanie Keenright and Kendra Batiste have volunteered as event facilitators. These teachers have been planning another event this spring, “Family Science Night: The Mad Chemist.” This time, however, Odom’s kindergarten teachers are planning another event this spring, “Family Science Night: The Mad Chemist.” This time, however, Odom’s kindergarten teachers Pat Shipley, Caroline Villareal, Stephanie Keenright and Kendra Batiste have volunteered as event facilitators. These teachers participate in the RASC’s teacher mentoring program: Teachers Engaged in Authentic Mentoring Strategies or TEAMS. Ms. Batiste indicated that her students are very excited to show what they have learned in class about chemistry to their parents. The Mad Chemist event is expected to be a great success!

continued from previous page, How Do We Create Communities of Learning?

On Having Enough Time
If we [teachers] haven’t got time to work at what we’re doing, that is, time to meet, to discuss, to think, the way they do at any other serious profession, then we might as well have a script! We need time to invent our own scripts. Not to mention that teachers might want to independently have families and children! We’re not appealing only to nuns and monks to enter the teaching field. The notion that a teacher’s school day is coincidental with the hours that our kids are in school is an absurd idea.

On Local Control of Schools
Legislators listen when there is a shared voice. It’s caught on – there’s a sort of return of courage. I mean, these are our kids! The reduction in the number of local school boards had been a disastrous mistake. It’s been a change in what we mean by public education. I think we need to go back to [a localized system] and school boards need to exert some feistiness about their rights. People who are making decisions about my child in third grade can’t be people who live in Washington, D.C.

On Interest Groups
People criticize teachers. They say, “Well, you’re a self-interest group.” And I think: Look at all those self-interest groups in the top of American culture right now who aren’t the least bit embarrassed about being a self-interest group. Why have we allowed ourselves to be embarrassed by it? Yes, I’m a self-interest group – I’m interested in my job being a healthy and strong job because that’s how people are going to stay in the profession. And I have a self-interest in my kid. All the people who have a direct self-interest in our schools have been made to feel that somehow or another that they’re biased. How have we bought into that? We ourselves have been embarrassed, chagrined to speak up. Of course I’m a self-interest group! This is an important self-interest group – I have an interest in kids! And in the teachers of America. We have to turn the tables on them because the people with really powerful, personal self-interest are the least embarrassed by it. Of course it’s not as easy for us to speak out, but we need to find a way. It’s shameful that we’ve been so silent.

In Conclusion
In the end, in order to teach well, we have to trust the kids. We have to trust that they want to learn, that they would like to be competent, and that if they mess up it’s because they don’t know how to do it any better. That’s the same view that I have of us as teachers. We’re messing up because we don’t know how to do it better. If I have families in the school who are messing up with their kids, it’s not because they don’t care, it’s not that they don’t love their kids, it’s because they are in a circumstance where they don’t know how to do it better. That’s the bottom line of trust that we need to build in a school.

continued from page 5, Trash Bash at Ermel Elementary

As a result of the 2002 clean up project, Ermel staff decided to participate in the Houston-Galveston Area Council “Rivers, Lakes, Bay’s N Bayous 2003 TRASH BASH” to clean up White Oak Bayou North. Ermel students and their parents, community leaders, scouts, members of a high school science ecology club, and 22 teachers and administrators from Ermel Elementary volunteered their time. Following the clean up, lunch, entertainment, souvenirs, and door prizes were offered in the Ermel cafeteria. The community took this event to heart and followed the motto: “Clean it like you mean it!” This was an opportunity for Ermel students, parents and teachers to work together towards a worthwhile cause while learning the importance of science and science education.

continued from page 5, Family Science Night at Odom Elementary

The preparation for Odom’s family science night began with mini-demonstrations of bubble making for each grade level. This built excitement and “chatter” about the festival during the days prior to the festival; both students and teachers were excited. In the days leading up to the festival, students asked questions about the festival and about bubble making. The whole community seemed to be aware of the upcoming festival. When Mr. Martinez purchased bubble materials at the local department store, the cashier asked if he was buying the materials for the bubble festival at Odom and asked if her children could attend (even though they didn’t go to Odom!). Odom teacher Pat Shipley indicated that she had not seen that much of a turnout at any parent event at Odom in her ten years of teaching at Odom. Her students still refer to Mr. Martinez as the “Bubble Man”. “Family Science Night: Science Bubble Festival” showed that parents, students and faculty will come to the school when the event is made exciting for them - even without food being served!

Odom is planning another event this spring, “Family Science Night: The Mad Chemist.” This time, however, Odom’s kindergarten teachers Pat Shipley, Caroline Villareal, Stephanie Keenright and Kendra Batiste have volunteered as event facilitators. These teachers participate in the RASC’s teacher mentoring program: Teachers Engaged in Authentic Mentoring Strategies or TEAMS. Ms. Batiste indicated that her students are very excited to show what they have learned in class about chemistry to their parents. The Mad Chemist event is expected to be a great success!
In the course of their study tour, the participants took literally thousands of pictures—many of which have already appeared on educational websites and CDs. The teachers also went into Chinese bookstores, music stores and handicraft shops in order to bring back books, magazines, maps, CDs, videotapes, advertisements, cultural relics, and everyday Chinese consumer goods to show their students. Many have created “culture chests” to display these artifacts. Some of the teachers conducted taped interviews with students and people on the street in order to capture the flavor of Chinese daily life and some have established connections with Chinese teachers and students in order to set up academic exchanges between their respective schools.

In all, the teachers gained substantially from the experience—not least by acquiring greater confidence in dealing with previously “alien” material. Several mentioned in their evaluations that spending time in China enhanced their “credibility” and gave them insights into the culture that readings and lectures alone could not have provided. As one of the teachers remarked, “I’ve had a personal relationship with China’s history and culture and can now share these experiences with my students.”

Not surprisingly, Rice will be applying once again for funds from the Freeman Foundation in the hope of sending another group of talented Houston-area secondary teachers to East Asia—perhaps this time to Japan as well as China.

continued from page 10, Epistemological Beliefs for Life

in the pursuit of knowledge. An adult community of learners who share their learning process with a community of students entices students to want to be a part of this multiage community. It is also a learning community that exposes their knowledge beliefs and encourages their development with analysis and validation of evidence. A spirit of “trust” and a “community of presumed equals” are important elements of this “setting.”

In two studies (Radigan, 2000, 2002) I chronicled the epistemological belief exchanges in classroom discussion for the frequency of their occurrence, the effect on students’ and teachers’ epistemological beliefs, and the pedagogical implications of those exchanges. I have learned that there is very little student expression of epistemological beliefs in the classroom and that a risk-taking student, who can be a discipline problem, often is responsible for the expression of epistemological beliefs when a dialogue of this nature occurs. When a teacher and her students establish a classroom ecology where alternative viewpoints are encouraged, epistemological beliefs seem to be expressed and debated. Meier extends my findings by suggesting that the culture of the school depends on a community of adult learners who are willing to express and explore alternative viewpoints and evaluate the evidence that supports those claims.

In an earlier work, Meier (1995) listed five “habits of mind” for students to use as members of learning communities. The habits include providing and evaluating evidence, recognizing and assessing alternate viewpoints, connecting knowledge, hypothesizing different possibilities, and deciding why the knowledge matters. Meier’s “habits of mind” used in a community of learners with a spirit of trust and equity make for the development of epistemological beliefs in an age when we are trying to cover information in our classes rather than trying to analyze a portion of that information.
Vivian Paley’s keynote speech, “The Amazing Road to Literacy: We Call Fantasy Play” further reflected on creating a safe place for children to grow in their understandings. Vivian Paley senses “a gradual lessening of ordinary niceness” in our schools today. She can hear the voices of the classic children’s authors, Beatrice Potter and Margaret Wise Brown, worrying about the technological distractions that kids face today. She visits classrooms where she sees teachers talking and talking for there is so much curriculum to cover.

Paley also recalls the time many years ago when she stopped talking and followed the children into play. She listened to discover the kinds of questions kids are eager to consider. She discovered that stories enlarged upon these questions and gave children opportunities to explore their concerns and interests. As she saw children grow in their understandings while intently involved in their play action, their fantasy play, Ms. Paley’s faith in play was strengthened. For Vivian Paley, play had seemed the natural way for children to learn all along.

Ms. Paley thinks we need to have faith in the power of play for the healthy development of children or we won’t find the time to work out the proof. “How can we prove what we instinctively know is true?” she asked. We can look at research such as Smolensk’s that found evidence that the absence of play hinders the development of second language learning. However, to experience the vitality of fantasy play one needs personally to listen to the children and to be part of the process. So Vivian Paley also spoke of some of the many classrooms in which she has been personally involved in the development of children’s thinking though fantasy play, which are well documented in her many books. Ms. Paley concluded by telling the story of the little boy in Susie Liddell’s kindergarten class, which she had also visited the day before her speech. He listened to Ms. Paley as she showed pictures of a Chinese boy who told stories in his classroom that she had visited in China. The little Houstonian had a story in response, but it was time to go to lunch. Being a poetic, actor type of child, his response was tears. Understanding the importance of communication with an individual, Ms. Paley sat back down to listen. Listen and learn, that’s what all the participants in the miniconference also did. For that experience, and the message she brought, we thank our honored guest, Vivian Paley.

This body of existing research into the role of student voice thus indicates that an essential area of (micro) research in education is the role of the student. It remains a largely unexplored aspect of educational research. It foregrounds the notion that if the purpose of teaching is learning, then the learner and the learner’s role must be as clearly delineated as is that of the teacher. Delineation of the role of the learner of necessity leads to exploring not only the responsibilities of the learner but also the rights and abilities of the learner. Hence, in my research an emerging and highly researchable theme is this agentic role of the student in dealing with the learning environment. The student makes the call, and is therefore in a doing position, rather than a done by position. From a critical perspective, this makes the student a major player in the educational process, capable of altering the power dynamics in the standard distribution of power in education.

Additionally, the allied research interest area of classroom teachers as researchers of their own work has also contributed to the emergence of the strand of research that seeks an understanding of students’ roles in classrooms. This post-structural perspective of the teaching/learning community has served as a catalyst that demanded explication of the roles of all the participants in the teaching/learning process. The current analysis will problematise the standard distribution of power in education. Exploring student voice is part of this critique of traditional schooling and the concomitant altering of the dynamics of power.

Over a period of a year, commencing Fall 2003, the researcher anticipates conducting ethnographic interviews with approximately 60 secondary school students (Grades 8-12) in two schools. To complement and triangulate the students’ perspectives selected teachers will be interviewed. In addition to individual interviews, after a preliminary coding and categorizing of the data, group interviews will be conducted with selected groups of students.

The interview data, together with field notes, and if available student academic records will provide the thick record for the final analysis of the agentic role of students in the educational process.

References:
To learn more about the Center’s teacher development programs, its publications and its research activities, see our website at http://www.rice.edu/education

To learn how to participate in one of the Center’s teacher development programs, contact the Center for Education at (713) 348-5145.

- Upcoming Events -

**June 9-27, 2003**
Summer Creative Writing Program for Young People, School Literacy & Culture Project (with Writers in the Schools), River Oaks Elementary School and Lanier Middle School

**July 7-11 & July 14-18, 2003**
Reading, Writing and Cultural Connections Summer Institutes, School Literacy & Culture Project, Kyle Morrow Room, Fondren Library, Rice University

Glenda White, Staff Assistant for the Center for Education, received the Outstanding Parent Involvement Partnership Award in the South District from HISD at its annual Salute to Volunteers for Public Schools April 9, 2003. The award recognized her exemplary volunteer service at Madison High School during the 2002-2003 school year.