



# Catalyst

Research . Engagement . Partnership

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## New Year Brings Growth, Progress

The new year is always an exciting time; it signals change, promises progress, and fills all of us with optimism.

This is a particularly exciting time for the School. We welcome seven new members to our growing faculty. As a crucial part of the School's rapid growth, these new faculty bring added expertise in math, science, and agricultural education; language and literacy; educational leadership and policy; and quantitative methodology.

In addition, we are actively recruiting for four new faculty positions—a professor of education & neurodevelopmental disorders, a professor of environmental science education, a professor of

educational testing and measurement, and an assistant professor of education in academic literacy for adolescents.

The School is also pleased to welcome 181 students this fall: 143 are entering the teaching credential/master's program, and 32 new students enrolled in our Ph.D. and Ed.D. programs. The number of students enrolled this fall represents a 31 percent increase over enrollment in 2002, when the School was established.

But our growth in faculty and students is just one of the indicators of our progress. This issue of the Catalyst highlights many other exciting developments at the School. We hope you enjoy it.

— Harold Levine, Dean

## Study Calls for Reform of State Categorical Program Funding

California's system for financing schools, particularly the nearly \$13 billion distributed through 124 categorical funding programs, is failing to provide the neediest schools with the resources and flexibility they need to raise student achievement, according to a study by Thomas Timar, associate director of the School's Institute for Education Policy, Law and Government.

According to Timar's study, "Categorical School Finance: Who Gains, Who Loses?" released by Policy Analysis for California Education (PACE), over the last 20 years the legislature has multiplied the number of categorical programs more than six-fold—from 17 in 1980 to the 124 in 2001-02. The intention was to ensure that districts

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Rebecca Ambrose works with students.

# M E E T Our Faculty

For Rebecca Ambrose, the key to teaching math to children lies in an understanding of how they solve problems before anyone has taught them.

“Kids use informal strategies and can figure things out in very interesting and sophisticated ways. What we observe about how they approach mathematical problem solving can inform the basis for teachers’ instruction,” said Ambrose.

Ambrose, who credits her approach to a method called Cognitively Guided Instruction (CGI), founded by Thomas Carpenter and Elizabeth Fenneman in the 1980s at the University of Wisconsin, is engaged in two research projects that have the potential to recast the way teachers approach mathematics instruction in elementary school and beyond.

At Glenwood Elementary in North Sacramento, Ambrose and graduate student Garrett Kenehan investigated

children’s understanding of three-dimensional geometry. Meeting with third grade students once a week for several months, the researchers were interested in how children think about geometry.

“Geometry has long been treated like the step-child of math,” said Ambrose. “It isn’t taught much until high school and then students have a lot of trouble with it. If we don’t give kids the opportunity to develop spatial thinking, only those few who have real gifts in this area will pursue and excel in careers that require this understanding.”

This research looked at whether an activity like building three-dimensional geometric objects is effective in engaging students in general math inquiry. An in-depth research article is due out this year.

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## WE’D LIKE TO HEAR FROM YOU

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# N E W S & E v e n t s

## UC Davis, CSU Sacramento and Sonoma State University Announce Joint Doctoral Program

Pending full approval of the Western Association of Schools and Colleges (WASC), UC Davis, Sonoma State and California State University, Sacramento, are set to launch a joint Ed.D. program: “Doctorate in Educational Leadership: Capital Region Alliance.”

Helping to fill a major need in Northern California, directors of the program for

working professionals expect to enroll the first cohort of 20 students in fall 2005.

“We are hoping to attract individuals who are eager to confront the real, daily problems facing school district and community college leaders,” said Paul Heckman, program co-director and education professor at UC Davis.

Serving a wide geographic region, bound by the Oregon border to the

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# You Say You Want a Revolution—It's Here Digital Television and Education



David Hosley

By David Hosley, Ph.D.  
*President and General Manager  
of KVIE Public Television*

Television as we've known it ended about two years ago.

A digital revolution, well underway, represents the greatest technological change in TV's history. Of course, most people know that high definition programming provides beautiful pictures and CD quality sound. But it's the educational applications that are really exciting in this emerging digital broadcast universe.

Perhaps most important is the death of the old adage that watching TV is a passive occupation. With digital broadcasting, true interactivity is possible—with broad implications for parents, teachers and for providers of professional development for teachers, such as the School of Education.

Digital technology provides a number of advantages over traditional analog broadcasting, not the least of which is multi-casting. Instead of having one program per channel, digital broadcasting enables several different streams of content to flow over the same channel. This enables the viewer not only to see several different elements on the same screen, but more importantly to takes tests, ask questions and mix video and text.

For parents this could mean a whole new approach to "educational television." For example, soon a child could be watching an episode of Sesame Street, her parent could be calling up a lesson associated with the content of the program on the

same screen (this might be in the form of a slide show and enable printing), and the child might end the program by choosing a related activity to print and complete at another time.

At KVIE, your local PBS station in the Sacramento region, we also offer training that coaches parents and other caregivers in using television effectively to help young children be prepared to succeed in kindergarten and beyond. Similar efforts are underway at public television stations across the country. The training can be in person or via a DVD and can be in English or Spanish.

For educators, Video on Demand is also a huge benefit that comes with digital cable. Teachers, and other viewers, who subscribe to Comcast will soon be able to request specific productions from their local public television stations, such as KVIE's series about the future of the Central Valley or the history of African Americans in this region.

## **Benefits to KVIE Viewers**

Right now less than 10 percent of viewers in this region have the HD receivers that allow them to watch digital channels. But the number is growing rapidly, and the Federal Communications Commission is hoping the majority of viewers will adopt the new technology by 2007.

Today, KVIE is taking advantage of digital to present three program streams on KVIE-DT during the day—programming for pre-schoolers, programs targeted for children in the early grades of

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north and the San Joaquin Valley to the south, Nevada and the Bay Area to the east and west, the program is designed to provide world-class training

to the growing number of school and community college administrators in the region without an advanced degree. The program is designed to be completed in three years.

“Pooling the resources of three great organizations to forge a strong program capable of this geographic reach is exciting,”

said Harold Levine, dean of the School of Education at UC Davis.

Applications for the first cohort beginning in August 2005 will be accepted until February 2005. Full-time working professionals with master’s degrees who are seeking further leadership positions in public schools or community colleges or who are interested in public policy are strongly encouraged to apply. For more information, see the School’s Web site at

<http://education.ucdavis.edu/academic/edd/delcra.html> or call (530) 752-0757.

### High Schoolers Spend Summer in Labs

In June 2004, as in so many summers past, about 40 high achieving high school sophomores and juniors participated in the School of Education’s Young Scholars Program, directed by Rick Pomeroy.

Participants work one-on-one with research faculty in state-of-the art laboratories for six weeks. Each student works on an individual project and prepares a journal quality paper and presentation about his or her work.

The 2005 program runs from June 19 – July 30. Teachers should encourage qualified students to apply. For more information and an online application, visit the program Web site at <http://ysp.ucdavis.edu>.



A high school student participating in the Young Scholars Program explains his research.

### Digital Television – continued from page 3

elementary school, and adult learners. The fourth service is a digital version of what’s on Channel 6. At night, KVIE-DT is devoted to PBS HD programs.

KVIE is also working with the Sacramento Educational Cable Consortium to provide programming for a high-speed network that links every public school in Sacramento County. We will be able to send KVIE productions, but also closed circuit programs like a recent series from

PBS on how to prepare for admission to college and plan with your family to pay for it. And it will be available whenever the instructor wants it, or it can be stored on a server at the school site.

As we go forward, KVIE hopes to partner with educational institutions like UC Davis to train teachers and reach out to parents of school-age children. We hope to offer continuing education for professionals on our digital service, too.



## **Center for Community School Partnerships Receives SBC Grant**

SBC Foundation, in partnership with the National Council for Community and Education Partnership, has awarded the Center for Community School

Partnerships (CCSP) a \$75,000 planning grant to partner with Esparto Middle School and two local service organizations (Rural Innovations in Social Economics and Hands Together). Together, this team will develop a strategic plan that brings together university, school and community

partners to increase outreach to families, leverage existing resources designed for at-risk youth, and explore best practices for building alliances in rural middle schools.

## **Principal Credits CRESS Center Partnership with School's Success**

Earlier last year, SBC also provided a \$25,000 grant to support staff development at another of the CRESS Center's K-12 partners, Parkway Elementary. In 2003-2004, Parkway accomplished a 65 point increase in its Annual Performance Index (API) score. The average increase districtwide was 25 points.

According to Principal Deborah Nelson, "These results proved that the staff development efforts...reaped meaningful benefits. Due to your dedication and commitment to the vision of Parkway, our students have a brighter future."

Renee Newton, director of the Center for

Community School Partnerships (CCSP) housed in the CRESS Center, notes that the work at Parkway "is an example of the continuum of professional development work in CRESS that unites the collaborative team building work of CCSP with the rigorous professional development work of the California Subject Matter Projects."

## **CRESS Service Remains Strong**

CRESS projects (Art, Math, Science, Writing, Teacher Research, Lesson Study, Healthy Start, After School, and Community School Partnerships) continue to average over 100 activities per year, involving over 1,200 participants, and delivering over 5,000 contact hours with teachers, administrators, and other student and school community providers.

## **CRESS Now Accepting Grant Applications**

The CRESS Center awards grants twice a year to educational research projects designed collaboratively by K-12 and university educators. These CRESS-funded research projects support two-way consultation between university and school personnel about research questions, data collection and analysis, reporting formats, and suggestions for improving practice. There are three categories of grants: Planning Grants (up to \$1000), Mini Grants (\$500 - \$3000), and Large Grants (up to \$15,000).

For more information, visit the Web site at <http://education.ucdavis.edu/cress/projects/grants.html>.



Esparto Unified board member Helen Voss, Superintendent Tom Michaelson, and Dean Harold Levine pose with Esparto Middle School students at the SBC grant ceremony.



Thomas Timar, author of "Reform of Categorical Finance in Education in California: Analysis and Recommendations," lectures in an educational policy course.

## Study – continued from page 1

with fewer tax revenues could provide the same quality of instruction as schools with the greatest tax base.

In fact, the study found that allocations from major programs are rarely correlated to any measure of local need. In some instances, better-off schools and their students receive the highest levels of funding.

"The goals of categorical finance reform should be to create a system that targets funds where they are needed and does so equitably and efficiently," said Timar. "Sadly, these well-intentioned programs were originally targeted at kids who need extra resources."

"Now this \$13 billion quiver of arrows is shot in various directions, rarely hitting the bull's-eye and spent with no apparent effect. These programs may be widening achievement gaps," he added.

Categorical programs now target a wide

range of needs from help for English learners to library materials and staff development. Many programs overlap, with Timar finding that, in general, all 124 programs fall into ten categories. Moreover, because these restrictive funds account for a third of all school funding, Timar discovered that today schools have \$355 less per pupil in general purpose funds than they did in 1980. This represents a decline in unrestricted funding of 8 percent versus an increase in categorical funding of 165 percent.

The complete study can be found on the School of Education's Web site at <http://education.ucdavis.edu/research/pace.html>.

*Note: A cooperative venture of UC Berkeley, UC Davis and Stanford University, PACE is an independent policy research center whose primary aim is to enrich policy debates with sound analysis and hard evidence.*

## Meet Our Faculty – continued from page 2

In February 2004, Ambrose embarked on a three-year project at Markham Elementary in Vacaville, California, funded by the California Postsecondary Education Commission. This work is exploring how children's thinking and the way they approach mathematical problem solving can inform professional development for teachers.

Collaborating on the project with UC Davis mathematics professor Evelyn Sylvia, Ambrose met with twelve K-6 teachers monthly. They discussed both

videotaped sessions of their students and individual interviews conducted with the children to better understand how children approach math problems.

Ambrose says she is excited about this project because it "employs all the principles of success: it's school-based, focused on what teachers are doing in the classroom, and we are discussing both the math and the teaching of the math. Our hope is that we will come out of this with some design principles for professional development in math."

# FACULTY Features

## Cary Trexler Honored by Peers

The American Association for Agricultural Education (AAAE) recently chose to honor Cary Trexler as the Western Region Outstanding Young Agricultural Educator for 2004. Honorees must display excellence in teaching and superior knowledge of the field. The purpose of the award is to recognize, encourage and reward individuals who exemplify excellence in agricultural education.

## Faculty Publication Notes

Karen Watson-Gegeo recently published two collections of poetry. The 76 poems in *Silver Mirrors* and *Silent They Are Lit* are about perception, transformation, social justice, and spirituality. Watson-Gegeo writes as a working-class, Cherokee/white woman who grew

up in a Pacific Northwest papermill town, and then in an agricultural community of the Central Valley where as a teenager, she worked alongside Mexican migrant farmworkers in the summer heat. Emilio Soltero, a graduate of the School's Ph.D. program last winter, did the artwork.

"Emilio's etching prints of Mexicana farmworkers mean so much to me," said Watson-Gegeo. "In 1994 I became disabled by an herbicide spraying. My poems express the knowing and spirituality that grows out of experiencing many kinds of suffering

and many gifts of awareness and love across my lifetime."

Jon Wagner's essay, "Constructing Credible Images: Documentary studies, social research and visual studies" appeared as the lead article in "Visual Research: Method and Representation," a special issue of the *American Behavioral Scientist* edited by Gregory C. Stanczak. Copies of the article and the entire issue (Vol 47, No 12) are available from SAGE Publications.

Alan Bellman released the following textbooks in 2004:

- Prentice Hall Mathematics: Algebra 1
- Prentice Hall Mathematics: Algebra 2
- Exploring Mathematics with Transformation Graphing

Steve Athanases authored a pair of new articles and co-edited and co-authored a book, all on strengthening the mentoring of new teachers in California's public schools, with Betty Achinstein of the New Teacher Center at UC Santa Cruz.

He presented a paper at the American Educational Research Association Annual Meeting in San Diego: "New teachers' reports of advocating for educational equity," co-authored with Luciana de Oliveira.

And he presented a paper titled "Fag is just another word for stupid: Seventh graders' perceptions of homophobic name-calling," co-authored with Tess Comar, at the American Educational Research Association Annual Meeting, San Diego.



*Silver Mirrors*  
by Karen Watson-Gegeo

# ALUMNI News & Notes

## SAVE THE DATE

Check the School's Web site at  
<http://education.ucdavis.edu>  
for details on these and other events.

### Distinguished Educational Seminar Series — 2005

Deborah Loewenberg Ball, February 28  
David Hestenes, April 25  
Charles Bazerman, May 23

If you'd like to receive updates and information on upcoming events, please send a note to [dljustice@ucdavis.edu](mailto:dljustice@ucdavis.edu)

## Education Graduate Named School Psychologist of the Year

Dyana Vukovich (1980) was named one of California's outstanding school psychologists by the California Association of School Psychologists during its annual conference in March 2004. Dyana received her teaching credential and Master's degree from UC Davis. She serves as the head school psychologist for the Vallejo City Unified School District.

## Education Partners Group Brings Together Alumni and Friends

Alumni and Sacramento area educators representing higher education, K-12, teachers, administrators, and other segments of the education community met recently to help plan for Education Partners, an organization central to the School of Education's vision for engagement and partnership. After introductory comments from Meg Stallard '68, Bill Cochran '73, '74, Sue Davis '72, '73, and Dean Harold Levine, the group exchanged ideas for building Ed Partners into something

that connects education alumni and educators with the School and each other, supports professional growth, and helps to create a School of Education that is engaged directly with schools and communities.

The next step is to decide on our focus for the next one to two years out of the many great ideas generated--and for that, we ask for your help. Notes from the November meeting are posted at <http://education.ucdavis.edu/edpartners>. Please take a moment to review them, and provide feedback. We look forward to hearing from you!

## Give—and Receive!

Charitable annuities are an easy way to generate income for you or someone you love while also investing in the future growth of the School of Education. There are a number of options that make it possible to tailor a gift that is right for you.

For more information, contact Jon Parro, Assistant Dean for External Relations and Development at (530) 754-7024.



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