From the Directors —

**In Remembrance of Leigh Burstein**

**Leigh Burstein**

*A Constant in My Life*

Eva L. Baker

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**Leigh Enriched Our Lives**

Robert L. Linn

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Here’s the rhythm of a typical UCLA encounter with Leigh, the kind we had together for 19 years.

I’m in my office, staring dumbly at the computer screen and Leigh pokes his head in. Do I have a minute? He enters at warp speed, scoping my shelves for new books. Rivaling Superman and DATA, he scans my desktop, using his unique upside-down reading skill.

His first line could be...”I just got off the phone with The Washington Post.”

... Or it might have been Newsweek or The Wall Street Journal. He was interviewed about the California assessment system, or a new congressional plan. Shaking his head, he says he was forced to tell the reporter that she was asking the wrong questions, to give her—using his favorite word—some context. Our conversation bounces to projects and school politics—his work with Lynn, with Ted and Marv, talks with Dale in the California Department of Education. He bubbles about jobs his former students have secured. The names spill...

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Leigh was an enthusiastic and tenacious scholar. He had an extraordinary intellect that he brought to bear on problems, but his impact was not limited to his personal efforts. By force of his personality he engaged others in questions that he found to be important. His work, both on multilevel analysis problems and on ways of taking opportunity to learn into account in the analysis and interpretation of student achievement, illustrates this unique combination of personal contributions and action as a catalyst to energize others to work on problems.

Leigh demanded a lot of himself and expected the most of others. He was always direct and honest in his interactions and sometimes rocked the boat, but it was always clear from his enthusiasm, openness, unquestioned friendship, and personal concern for others that his motivation was to find ways to maximize what we could learn about education. Without question, his prodding made everyone who interacted with him do things better. His untimely death will...
Full CRESST Technical Reports Available Free On-Line

In its attempt to make CRESST research available to the widest possible audience, CRESST is pleased to announce the availability of full technical reports on-line. Each report contains full text, tables, and illustrations as identical as possible to the original report and accessible to Macintosh, IBM and UNIX users. Adobe Acrobat software was used to put the reports into “PDF” files that can be downloaded and then read or printed.

“This new capability,” said CRESST Associate Director Joan Herman, “continues CRESST’s leadership in disseminating educational research via the latest advances in technology.”

Herman added that literally millions of potential users now have the capability to read about CRESST research in its most original form, the technical report, and at virtually no cost.

The reports may be downloaded and printed through CRESST’s new World Wide Web II server at: http://www.cse.ucla.edu. CRESST’s second generation Web features improved formatting and organizational structure.

This innovation makes nearly all of the research conducted under the current CRESST grant available free. Additional work will soon make the reports available via the CRESST gopher server.

CRESST will continue its publication and distribution of technical reports via normal print mediums for those without access to the Internet.

New Stuart Foundations Grant Awarded to CRESST

The Stuart Foundations recently announced a new three-year, $660,000 grant to the National Center for Research on Evaluation, Standards, and Student Testing (CRESST). CRESST Co-director Eva L. Baker is the principal investigator for the Language Arts Standards Project, while teacher Charlotte Higuchi serves as the project director. Bringing together a long-standing partnership between United Teachers of Los Angeles, the Los Angeles Unified School District, and CRESST, the grant seeks to improve student performance in the language arts by establishing districtwide content standards, rigorous curriculum, and performance assessments. Teacher, parent, administration, business, and community representatives will be involved throughout the grant period.

1995 CRESST Conference

The 1995 CRESST Conference will be held from September 10-September 12, 1995, at UCLA’s Sunset Village. Many CRESST researchers are expected to present their current assessment research during the full two-day conference. CRESST researchers include:

CRESST Co-directors Eva L. Baker and Robert L. Linn;

(alphabetically)
Jamal Abedi, UCLA
Pamela Aschbacher, UCLA
Gail Baxter, University of Michigan
Darrell Bock, National Opinion Research Center
Hilda Borko, University of Colorado at Boulder
Pauline Brooks, UCLA
Frances Butler, UCLA
Richard Durán, University of California, Santa Barbara
Roberta Flexer, University of Colorado at Boulder
Maryl Gearhart, UCLA
Robert Glaser, University of Pittsburgh
Joan Herman, UCLA
Ernest House, University of Colorado at Boulder
Daniel Koretz, The RAND Corporation
Robert Land, UCLA
Lorraine McDonnell, University of California, Santa Barbara
Robert Mislevy, Educational Testing Service
Bengt Muthén, UCLA
David Niemi, UCLA
John Novak, UCLA
Harold F. O’Neil, Jr., University of Southern California
Lawrence O. Picus, University of Southern California
Lauren Resnick, University of Pittsburgh
Richard Shavelson, Stanford University
Lorrie Shepard, University of Colorado at Boulder
Ron Stevens, UCLA
Mary Lee Smith, Arizona State University
Richard Snow, Stanford University
Brenda Sugure, University of Northern Colorado
Brian Stecher, The RAND Corporation
Noreen Webb, UCLA
Lynn Winters, UCLA

The cost for the conference, including two nights of lodging and meals for two days, is expected to be the same as last year, $275. Cost for commuters, including the conference and several meals but no housing, is expected to be $125. Registration materials and more details will be contained in the Summer 1995 CRESST Line. Anyone who requires early registration should contact Allan Breit, CRESST/UCLA, 10880 Wilshire Blvd., Suite 700, Los Angeles, CA 90024-1394; e-mail: allan@cse.ucla.edu; phone (310) 206-1532.
T he following is a list of CRESST researchers and many of their sessions at the 1995 AERA/NCME meetings. We have tried to make this as accurate as possible, but recommend you check your program guides for changes. Because of space limitations, this list reflects only CRESST researchers, not all colleagues participating in the sessions. Our thanks to those colleagues as well. We have listed only the original university affiliation for each researcher.

### APRIL 18, TUESDAY AFTERNOON

1.01 Marrying Constructivist and Skill-Based Models: Should We, and Could Technology Help?
12:00-1:55-Hilton, Parlor 5, Ballroom Level
Presenter: Lauren Resnick, University of Pittsburgh

1.05 Putting Research to Work: Synthesizing Multidisciplinary, Multilevel Research Findings
12:00-1:55-Hilton, Imperial B, Ballroom Level
Discussant: Edmund W. Gordon, Yale University

1.18 Research on Evaluation
12:00-1:30-Hilton, Union Square 23, 4th Floor
Presenter: Ernest House, University of Colorado at Boulder
*(Evaluation Inside the NSF: A 3-Year Study)*

4.52 Issues for Scoring Performance Assessments: Reinventing the Wheel or Designing a Better Mousetrap?
2:15-3:45-Parc 55, Ballroom III, 4th Floor
Chair: Eva Baker, UCLA
Discussant: Joan Herman, UCLA

6.62 Integrating Classroom and Large-Scale Uses of Portfolios: Challenges, Possibilities, and Possible Impossibilities
4:05-6:05-Hilton, Union Square 17, 4th Floor
Chair: Joan Herman, UCLA
Presenter: Daniel Koretz, RAND Corporation
*The Vermont Portfolio Assessment Program*
Presenters: Maryl Gearhart, UCLA; Shelby Wolf, University of Colorado at Boulder
*A Study of the Student’s Role in Constructing CLAS Language Arts Portfolios*

6.67 Cracks in the Bell Curve
4:15-6:15-Hilton, Parlor 5, Ballroom Level
Reactor: Robert Glaser, University of Pittsburgh

### APRIL 19, WEDNESDAY MORNING

8:15-10:15-Parc 55, Barcelona II, 3rd Floor
Presenter: Robert Glaser, AERA President, 1971-1972, University of Pittsburgh

12.48 School Finance in a New Key: Harnessing Resources to School Reform
8:15-10:15-Parc 55, Raphael, 4th Floor
Presenter: Lawrence O. Picus, University of Southern California
*(National Goals 2000 and Interstate Fiscal Disparities: Compatible or Incompatible?)*

12.59 Progress in Preservice Teachers’ Knowledge: Using Multiple Methods to Study the Same Students
8:15-10:15-Hilton, Union Square 12, 4th Floor
Discussant: Hilda Borko, University of Colorado at Boulder

NCME Technical Issues in Large-Scale Performance Assessments
8:15-10:15-Hilton, Yosemite C, Ballroom Level
Presenter: Robert Linn, University of Colorado at Boulder
*(Comparability)*

14.05 Understanding Change in Elementary Mathematics Classrooms: A Longitudinal Analysis of Teachers and Students
10:35-12:05-Hilton, Yosemite A, Ballroom Level
Discussant: Lauren Resnick, University of Pittsburgh

14.18 Teaching and Studenting: Implementing Teaching Reforms in Teacher Education
10:35-12:05-Hilton, Union Square 14, 4th Floor
Chair: Kathryn Davinroy, University of Colorado at Boulder
Presenter: Hilda Borko, University of Colorado at Boulder
APRIL 19, WEDNESDAY MORNING

14.59 Broadening the Technology Bandwidth: Telecommunications, Networks, and Video Conferencing
10:35-12:05-Hilton, Parlor 5, Ballroom Level
Presenters: Harold F. O’Neil, Jr., University of Southern California; Gregory Chung, Richard Brown, UCLA
(Use of Networked Computer Simulation to Measure Team Processes and Team Outcomes)

APRIL 19, WEDNESDAY AFTERNOON

16.15 Multivariate Psychometric and Statistical Procedures
12:25-1:55-Hilton, Union Square 1, 4th Floor
Presenter: Jamal Abedi, UCLA
(The Effects of Between- and Within-Item Parcel Homogeneity on a Latent-Variable Measurement Model)

16.36 The Political Context of Educational Reform
12:25-1:55-Parc 55, Ballroom II, 4th Floor
Discussant: Richard Duran, University of California, Santa Barbara

16.58 Children’s Argumentation During Story Discussions
12:25-1:55-Nikko, Ballroom I, 3rd Floor
Discussant: Lauren Resnick, University of Pittsburgh

18.11 Investigating the Cognitive Validity of Performance Assessment in Science
2:15-3:45-Hilton, Parlor 8, Ballroom Level
Chair: Joan Herman, UCLA
Presenters: Gail Baxter, University of Michigan; Robert Glaser, University of Pittsburgh
(Using Characteristics of Component Performance as Indicators of Cognitive Activity)
Presenters: Brenda Sugrue, University of Northern Colorado; Rosa Valdes, UCLA
(Interpreting Cognitive Components of Performance From Converging Sources of Evidence)

APRIL 19, WEDNESDAY EVENING

Leigh Burstein Remembrance (for close friends of Leigh)
6:15-7:30-Hilton, Parlor 7, Ballroom Level

UCLA Graduate School of Education and Information Studies Reception
7:30-9:00-Hilton, Imperial A, Ballroom Level

APRIL 20, THURSDAY MORNING

25.05 The Impact of Alternative Assessments on Teachers’ Knowledge and Practice
8:15-10:15-Hilton, Parlor 5, Ballroom Level
Presenters: Hilda Borko, Vicky Mayfield, Scott Marion, University of Colorado at Boulder
(Teacher’s Developing Ideas and Practices About Mathematics Performance Assessment: Successes, Stumbling Blocks, and Implications for Performance Development)
Presenters: Shelby Wolf, University of Colorado at Boulder; Maryl Gearhart, UCLA
(Engaging Teachers in Assessment of Their Students’ Narrative Writing: Patterns of Impact and Implications for Professional Development)
Presenters: Pamela Aschbacher, Ellen Roth, UCLA
(Teachers’ Evolving Understanding of Portfolio Assessment and Its Integration With Curriculum and Instruction)
Presenters: Brian Stecher, Karen Mitchell, RAND Corporation
(Vermont Teachers’ Understanding of Mathematical Problem Solving and “Good” Math Problems)
APRIL 20, THURSDAY MORNING

25.10 New Assessment Designs for Comprehensive Service Models  
8:15-10:15-Hilton, Franciscan D, Ballroom Level  
Presenter: Richard Shavelson, Stanford University

25.66 Conceptual Reorganization and Instruction  
8:15-10:15-Hilton, Union Square 1, 4th Floor  
Discussant: Lauren Resnick, University of Pittsburgh

27:05 Developing a Nationally Standardized Performance NCME Assessment in Writing: Exploring the “Credible Questions”  
10:35-12:05-Hilton, Yosemite B, Ballroom Level  
Discussants: Joan Herman, UCLA; Robert Linn, University of Colorado at Boulder

27:12 Certification of Exemplary Teachers: Not Necessarily a Straight-Line Function  
10:35-12:05-Hilton, Parlor 7, Ballroom Level  
Presenter: Lynn Winters, CRESST (Performance Feedback to Teachers)

27:47 Understanding Self-Regulated Learning  
10:35-12:05-Parc 55, Dante, 4th Floor  
Presenters: Harold F. O’Neil, Jr., University of Southern California; Richard Brown, UCLA (The Differential Effect of Question Format in Math Performance Assessment on Self-Regulatory Learning)

APRIL 20, THURSDAY AFTERNOON

29.15 Becoming Teachers: A Language Minority Perspective  
12:25-1:55-Hilton, Union Square 1, 4th Floor  
Chair: Richard Durán, University of California, Santa Barbara

30.05 Analyses Based on Existing Assessment Instruments  
1:15-1:55-Hilton, Plaza Ballroom, Lobby Level, TABLE 26  
Presenter: Jamal Abedi, UCLA (Dimensionality of NAEP Mathematics Subscales)

2:15-3:45-Hilton, Union Square 21, 4th Floor  
Presenter: Eva Baker, UCLA (United States)

NCME Large-Scale Science Performance Assessment Results:  
H1 Informing Test and Score Development  
12:25-1:55-Hilton, Union Square 11, 4th Floor  
Discussant: Gail Baxter, University of Michigan

APRIL 20, THURSDAY MORNING

NCME Minority Students and Opportunity to Learn Standards: How Can Assessment Inform Equity Issues?  
12:25-1:55, Hilton, Franciscan D, Ballroom Level  
Presenter: Eva L. Baker, UCLA (Relationship of Instructional Experience and Student Performance: Good News)

APRIL 21, FRIDAY MORNING

37.48 Evaluation–School Programs  
8:15-9:45-Parc 55, Aragon, 3rd Floor  
Presenters: Randy Fall, Noreen Webb, UCLA (Group Discussion and Large-Scale Language Arts Assessment: Effects on Students’ Comprehension)

NCME Performance Assessment  
L1 10:35-12:05, Parc 55, Ballroom II, 4th Floor  
Moderator: Pamela Aschbacher, UCLA

NCME Workplace Readiness Assessment: The Role of School Based Assessment  
10:35-12:05, Parc 55, Medici, 4th Floor  
Presenter: Jonathan Troper, UCLA (School Based Assessment)

APRIL 21, FRIDAY AFTERNOON

41.38 A Hands-On Look at Hands-On Science Assessments: How They’re Built, How They Work, for Whom, and for What  
12:25-1:55-Parc 55, Ballroom III, 4th Floor  
Presenter: Richard Shavelson, Stanford University

41.40 The Promise of Performance Assessments: Theory and Reality  
12:25-1:55-Parc 55, DaVinci I, 4th Floor  
Discussant: Eva Baker, UCLA

43.17 Mentoring Minority Scholars: It’s More Than Sharing Lives  
2:15-3:45-Hilton, Union Square 1, 4th Floor  
Panelists: Edmund Gordon, Yale University; Richard Durán, University of California, Santa Barbara

43.47 Allocation and Use of K-12 Educational Resources: A Summary of “What Dollars Buy” in California, Florida, Minnesota, and New York  
2:15-3:45-Nikko, Pink Pearl 1, 3rd Floor  
Presenter: Lawrence O. Picus, University of Southern California (What Education Dollars Buy: Evidence From California)
APRIL 21, FRIDAY AFTERNOON

45.15  Beyond Mental Abilities: Nonability Predictors of Learning and Performance
        4:05-6:05-Hilton, Parlor 8, Ballroom Level
        Discussant: Richard Snow, Stanford University

APRIL 22, SATURDAY MORNING

50.36  Student Understanding and Problem Solving in Mathematics
        8:45-9:25-Hilton, Plaza Ballroom, Lobby Level, TABLE 12
        Presenter: David Niemi, UCLA
        (Assessing and Teaching for Fraction Understanding)

50.45  Sociocultural Theory and the Role of Teachers
        8:15-10:15-Hilton, Union Square 15, 4th Floor
        Discussant: Richard Durán, University of California, Santa Barbara

50.55  Standard-Setting Studies: Doing It Right
        8:15-10:15-Nikko, Ballroom I, 3rd Floor
        Discussant: Lorrie Shepard, University of Colorado at Boulder

52.31  Utilizing Research to Inform Practice
        10:35-11:15-Hilton, Plaza Ballroom, Lobby Level, TABLE 10
        Presenter: Ronald Dietel, UCLA
        (Evaluating the Effectiveness of an Educational Research Center's Dissemination Program)

52.32  Current School Funding Policy Issues in the Western States
        10:35-11:15-Hilton, Plaza Ballroom, Lobby Level, TABLE 14
        Presenter: Lawrence O. Picus, University of Southern California
        (Current School Funding Policy Issues in California)

52.65  Discourse Patterns and Student Diversity
        10:25-12:05-Hilton, Franciscan D, Ballroom Level
        Discussant: Richard Durán, University of California, Santa Barbara

APRIL 22, SATURDAY AFTERNOON

54.12  Learning as Related to Spatial Ability, Course Length, and Technology
        12:25-1:55-Hilton, Parlor 7, Ballroom Level
        Chair/Critic: Richard Snow, Stanford University

54.59  Urban Education: Complex Definitions and Programming
        12:25-1:55-Hilton, Plaza Ballroom, Lobby Level, TABLE 23
        Presenter: Pauline Brooks, UCLA
        (Urban Student Achievement in a Publicly Funded After-school Program)

56.05  Mental Models and Representation in New Assessments
        2:15-4:15-Hilton, Yosemite C, Ballroom Level
        Chair/Overview: Harold F. O'Neil, Jr., University of Southern California
        Presenter: Howard Herl, UCLA
        (Validity of Expert-Based Performance Criteria)

56.40  Conceptualizing Ethnic Identity
        2:15-4:15-Parc 55, Sienna, 3rd Floor
        Presenter: Pauline Brooks, UCLA
        (Cultural Considerations When Conducting Ethnographic Research With and Within African American Communities)

Special Programs
In Memory of Leigh Burstein

On Wednesday, April 19, 1995, a special session will be held in memory of Leigh Burstein at the American Educational Research Association meeting in San Francisco. The session, Sleepless in Woodland Hills: The Leigh Burstein Legacy, will take place from 4:05 - 6:05 p.m. in the Hilton Hotel, Yosemite A, Ballroom level. Norcen Webb will chair the session featuring Leigh’s colleagues and friends. Presenters from UCLA include Eva Baker, Lynn Winters, Bengt Muthén, Jeannie Oakes, and Michael Seltzer. Other presenters include Anthony Bryk, University of Chicago; Daniel Koretz, RAND Corporation; Lorraine McDonnell, University of California, Santa Barbara; Gretchen Guiton, University of Southern California; William Schmidt, Michigan State University; and David Wiley! Northwestern University. Richard Shavelson from Stanford University is the discussant.

From 6:15 - 7:30 p.m., Wednesday, April 19, 1995, there will be a Leigh Burstein remembrance for close friends in Parlor 7 of the Hilton Hotel. The UCLA Graduate School of Education & Information Studies reception will follow from 7:30 - 9:00 p.m. in Imperial Room A of the Hilton.

Finally, a special issue of Educational Evaluation and Policy Analysis in honor of Leigh Burstein is in preparation. Papers have been submitted and are currently in review.
When Leigh Burstein died on July 7, 1994, he left behind a legacy of commitment to UCLA students, to fellow professors and staff, and to the entire educational measurement community.

“We have lost a giant intellect,” said Theodore R. Mitchell, dean of the UCLA Graduate School of Education & Information Studies (GSE&IS). “Leigh was a powerful advocate, a caring colleague, and most of all, a true friend,” said Mitchell.

At the time of his death, Leigh had been a UCLA faculty member for 19 years and had recently been appointed to head GSE&IS’s Social Research Methodology Division. Fully involved in CRESST research since the first CRESST grant in 1985, Leigh died of a heart attack while jogging in Annapolis, Maryland. He was attending the Third International Mathematics and Science Study (TIMSS) as a member of the U.S. National Steering Committee.

“Leigh deeply cared about his students,” said Bokhee Yoon, a former Burstein doctoral student now employed at CTB/MacGraw-Hill. “He expected you to grow academically as a student and gave you responsibility and support all the way. He also encouraged his students to know the substantive issues first and foremost, and then apply statistical models with wisdom.”

“There was great breadth to Leigh’s contribution to education,” said longtime friend and colleague Lorraine McDonnell. “Unlike many researchers, Leigh advanced both methodology and the understanding of substance.”

RECENT CAREER

Leigh’s recent research focused on educational indicators, measurement of learning opportunities and instructional practices, and the NAEP validity studies.

Education Indicators

Policy makers need better educational information about the quality of educational programs and processes and the nature and effectiveness of educational reform efforts.

Leigh’s focus on indicators dates back to 1984, when he led a Center for the Study of Evaluation investigation into the use of state testing data for national comparisons of states’ educational achievements. This research eventually led to a CRESST Quality Indicators Study group wherein CRESST faculty, staff, and affiliates analyzed improved indicators of student performance. Leigh’s research made its way into an article for the 1992 Encyclopedia of Educational Research and the 1991 report Education Counts: An Indicator System to Monitor the Nation’s Educational Health. The latter report foreshadowed much of the current performance assessment dialogue and recommended that student indicators be expanded to include student participation and engagement in school, student attitudes and beliefs, and postsecondary transitions.

“Policy considerations drove Leigh’s interest in education indicators,” said CRESST Associate Director and colleague Joan Herman. “Leigh was committed to the use of data to improve education. I think it was his most significant contribution to early CRESST research.”

...he supported research that focused on the analysis of between-system variations and within-system educational opportunities.

A critical component of his indicators research was the concept of benchmarking indicator surveys. Leigh and Lorraine McDonnell proposed the notion that it was better to invest in a smaller number of intensive examinations (deeper probes) of carefully sampled schools than superficial surveys of many schools. Much of the conceptualization of this work was published in the 1989 CRESST/RAND study Discovering What Schools Really Teach: Designing Improved Indicators.

Closely related to better indicators for American education was Leigh’s work on cross-national and international research and policy. Although he clearly admitted the hazards of making international education comparisons, he supported research that focused on the analysis of between-system variations and within-system educational opportunities.

Part of this research extended as far back as 1976 when Leigh was involved in the design, guidance, analysis, and reporting of the IEA Second International Mathematics Study (SIMS). SIMS was the first IEA survey to collect data on student progress (learning) as opposed to student achievement status. Collecting student performance data prior to and following a year of instruction, SIMS also compiled detailed information about both general and subject-matter specific classroom practices. Leigh made important contributions to
this landmark study including the analysis and reporting of data in ways that highlighted linkages between teaching and learning.

My goal is to influence the community of researchers to think more carefully about the role that research can play in international improvement in education and to encourage policy makers to use such information appropriately and wisely.

Opportunity to Learn

The quality of measurement of learning opportunities and instructional practices has been a long-term concern in educational research. Thus, Leigh’s experience with multilevel methods of investigating educational effects and his interest in improved indicators found him deeply involved in developing new methods for measuring students’ opportunities to learn.

The task [in opportunity to learn] is to achieve a balance/equilibrium between the contextually rich and sensitive “good data” collected by what are likely to be intrusive and burdensome methods versus more distal, potentially less sensitive, survey data that can be collected more comparably, routinely, and less intrusively.

Leigh suggested that the most viable strategy for measuring opportunities to learn would be to conduct ongoing benchmarking and validation studies.

These benchmarking studies could produce intermediate information…

Benchmarks would be established by carrying out more in-depth data collection and associated investigations in a limited number of survey sites (chosen systematically to vary in exposure to desired curriculum and instructional experiences) in conjunction with the collection of survey data on opportunities to learn and instructional conditions.

These benchmarking studies could produce intermediate information in the form of teacher logs and time-use budgets, teacher interviews, analyses of instructional artifacts and student work samples, and more in-depth case studies involving multi-occasion classroom observations and videotaping.

Leigh’s CRESST opportunity-to-learn projects were investigating just such an approach at the time of his death, and his work in the area is influencing CRESST researchers Joan Herman, Lynn Winters, Bengt Muthén, and Eva Baker.

NAEP Validity Studies

In 1990, Leigh collaborated with Robert Linn, Daniel Koretz, Eva Baker and several other researchers on a series of validity studies for the National Assessment of Educational Progress. One of the primary questions was whether or not the NAEP achievement levels in mathematics truly represented what students could actually do. After a careful study, the authors concluded that the existing achievement levels (basic, proficient, and advanced) in mathematics did not accurately represent student knowledge or skills. They recommended a major redesign of the alignment between mathematics achievement levels, frameworks, and items. (See the summary of CSE Technical Report 393, this issue.) These important findings will have major long-term impact not only on the use of NAEP achievement level results but on the NAEP itself.

A Great Loss

Certainly there were many other contributions that Leigh made to the educational research community. They may be found in his 19 years of writings on improved measurement techniques for American education. But it is also important to remember that Leigh was a man deeply committed to his family and the UCLA community. He is survived by his parents, two sisters, his father-in-law, his wife and three children.

“Leigh was among a select group of scholars in our field,” said CRESST Co-director Robert Linn. “His career was in full swing. No one can ever replace Leigh’s energy, his knowledge, or his enthusiasm.”

“The loss of Leigh is absolutely incalculable,” concluded CRESST Co-director Eva Baker. “He contributed fully to the life of the university. He was the school’s most active prodder and its most vocal supporter. We all miss his love and his involvement.”
New CRESST Reports

The following new CRESST reports are available by calling Kim Hurst, (310) 206-1532, or sending a message to Kim at: kim@cse.ucla.edu. You may write our offices at CRESST/UCLA, 10880 Wilshire Blvd., Suite 700, Los Angeles, CA 90024-1394. Orders under $10.00 must be prepaid. Most reports are also available via the CRESST World Wide Web, see page 2 for details.

Performance-Based Assessment for Accountability Purposes: Taking the Plunge and Assessing the Consequences by Leigh Burstein CSE Technical Report 390, 1994 ($2.50)

Delivered by the late researcher and CRESST colleague Leigh Burstein, this 1991 AERA paper presents many of the key issues that have formed the basis of CRESST research. Burstein discusses, for example, linkages between assessment design and assessment purposes, technical and feasibility criteria for different alternative assessments, and a wide array of implementation concerns, such as how much guidance a performance assessment prompt should give to students and professional development needs for teachers.

Toward the Instructional Utility of Large-Scale Writing Assessment: Validation of a New Narrative Rubric by Meryl Gearhart, Joan Herman, John Novak, Shelby Wolf, and Jamal Abedi CSE Technical Report 389, 1994 ($4.00)

The purpose of our study,” wrote the authors, “was to gather evidence of validity for the Writing What You Read (WWYR) rubric, through technical comparisons with an established narrative rubric that has consistently demonstrated sound technical capabilities in large-scale assessments of elementary level writing.” Designed for classroom use, the WWYR rubric contains scales for theme, character, setting, plot, and communication, and a sixth holistic scale for overall effectiveness. “Our findings,” wrote the authors, “regarding the reliability and validity...yielded promising but mixed evidence of the utility of the Writing What You Read rubric for large-scale assessment.”


Drawing on data from student surveys, demographic data, interviews with students and teachers, and structured classroom observations of students, CRESST researchers studied teachers and students who participated in the 1993 California Learning Assessment System (CLAS) test in mathematics. Among the key findings – alternative assessments stimulate student thinking and problem solving. Researchers also surveyed teachers and students on a variety of opportunity-to-learn (OTL) indicators. Researchers found that students at different types of schools had similar access to many OTL resources such as calculators and a curriculum that went beyond standard “drill and kill” instruction. More problematic was the finding that urban students tended to have more questions about key concepts in mathematical thinking, less access to current textbooks than their suburban counterparts, and were less confident of their preparation for the assessment.

Generalizability of New Standards Project 1993 Pilot Study Tasks in Mathematics by Robert Linn, Elizabeth Burton, Lizanne DeStefano, and Matthew Hanson CSE Technical Report 392, 1994 ($3.50)

Students may have to complete as many as 9-17 “long” performance assessment tasks if educators are to be confident that student performance matches true ability in a given domain, according to this important new CRESST study. Because a long task typically requires students to give complex, multifaceted responses requiring one to three hours to administer, the time and cost implications are significant.

The performance tasks analyzed are from the New Standards Project, a joint project of the National Center on Education and the Economy and the Learning Research and Development Center. The authors make recommendations that may help resolve some problems and which are being pursued by researchers in the New Standards Project.

Mapping Test Items to the 1992 Mathematics Achievement Levels Descriptions: Mathematics Educators’ Interpretations and Their Relationship to Student Performance by Brenda Sugrue, John Novak, Leigh Burstein, Elizabeth Lewis, Daniel Koretz, and Robert Linn CSE Technical Report 393, 1994 ($3.50)

This study by CRESST researchers concludes that the NAEP descriptions of mathematics achievement levels of basic, proficient, and advanced do not match what students are really able to do. Independent judges analyzed the specific skills associated with each achievement level and the appropriate NAEP test items.

“The lack of agreement, conclude the researchers, “among the mathematics educators indicates that the criteria to which NAEP is attempting to relate performance are too ill-defined.” The researchers recommend that the National Assessment Governing Board, who has responsibility for the NAEP, start the process anew by closely aligning the achievement levels with the development of new assessment frameworks and items.
Effects of Introducing Classroom Performance Assessments on Student Learning
by Lorrie Shepard, Roberta Flexer, Elfrieda Hiebert, Scott Marion, Vicky Mayfield, and Timothy Weston
CSE Technical Report 394, 1995 ($2.50)

A new CRESST study says that introducing performance assessments into the classroom does not automatically yield achievement improvements for students. “Results in reading showed no change or improvement attributable to the [performance assessment] project,” write researchers. Additionally, the authors found only small performance gains in mathematics. However, they did find significant qualitative changes in mathematics classrooms. “The changes that did occur,” write the researchers, “confirm our beliefs that many more students can develop conceptual understandings presently exhibited by only the most able students—if only they are exposed to relevant problems and given the opportunity to learn.”

“How Does My Teacher Know What I Know?” Third Graders’ Perceptions of Math, Reading, and Assessment
by Kathryn Davinroy, Carribeth Bliem, and Vicky Mayfield
CSE Technical Report 395, 1995 ($2.50)

Regardless of the type of assessment used in the classroom, students continue to have the same traditional understandings of assessment, suggests a new CRESST study. “Students believe that assessment activities are often aimed at measuring their handwriting, punctuation, [and] expression when reading out loud,” say researchers Kathryn Davinroy, Carribeth Bliem, and Vicky Mayfield, in this CRESST report.

“Our findings,” conclude the authors, “about student perceptions regarding reading, mathematics, and assessment support contentions that reform takes time if perceptions and understandings are going to change significantly.”

How “Messing About” with Performance Assessment in Mathematics Affects What Happens in Classrooms
by Roberta J. Flexer
CSE Technical Report 396, 1995 ($2.50)

When provided adequate staff development and administrative support, teachers will adopt performance assessment and new instructional methods into their classroom, concludes Roberta Flexer. Flexer conducted an in-depth qualitative study in three urban Denver schools. “In short, the introduction of performance assessment,” says Flexer, “provides teachers with richer instructional goals than mere computation and raises their expectations of what their students can accomplish in mathematics and what [teachers] can learn about their students.”

An Analysis of Parent Opinions and Changes in Opinions Regarding Standardized Tests, Teacher’s Information, and Performance Assessment
by Lorrie A. Shepard and Carribeth L. Bliem
CSE Technical Report 397, 1995 ($5.00)

CRESST researchers report that parents’ favorable ratings of standardized tests does not imply a preference for such measures over less formal sources of information. Third-grade parents involved in the study said that report cards, hearing from the teacher about their child’s progress, and seeing graded samples of student work is much more useful in learning about their child’s progress than standardized tests. The authors also found that approval of standardized tests by parents does not imply a disapproval of performance assessments. When parents in the study had a chance to look closely at performance assessment problems, most endorsed their use for district purposes and especially preferred their use in classroom contexts. (Note: This report is an update to CSE Technical Report 367.)

Cognitive Analysis of a Science Performance Assessment
by Gail Baxter, Anastasia Elder, and Robert Glaser
CSE Technical Report 398, 1995 ($5.00)

In this study, students engaged in a mystery powders instructional unit and related performance assessment. The assessment required students to use what they had learned from the unit and apply it to an experiment in which they identified chemical substances contained in each of six mystery powders. “High and low scoring students displayed qualitatively different performance characteristics,” reported the authors. The results offer important evidence that performance assessments, when carefully designed, can and do measure complex thinking skills.

Measurement of Teamwork Processes Using Computer Simulation
by Harold F. O’Neil, Jr., Gregory K. Chung, and Richard S. Brown
CSE Technical Report 399, 1995, ($5.00)

A new CRESST research study suggests that simulation technology can be effectively applied to the assessment of student teamwork and negotiation skills. The implications for applying such technology to performance assessment may be significant. Using a computer simulation based on earlier CRESST studies, the researchers created a negotiation scenario that required students to work in teams across networked computers. The results of the study indicate that measurement of teamwork skills can be accomplished in a reasonably reliable and much more time-efficient manner than that of earlier approaches.
Eva Baker...from page 1

out—Bob, Bill, Ed, Dan, David, Joan, Jeannie, Emerson, Harold, Mike, Recnie, Bengt—people in our building or around the world—and always and again, about his best friend, Rich. He updates me about what’s really going on in Paris, in Washington, or in a UCLA job search. The information highway runs directly through his brain. I’ve no need to read my mail. He demands to know what’s new with me—who I’ve seen, my travel plans. I’m invariably chastised for keeping him out of the loop on one of my activities—although I think he’s in more loops than macramé.

Soon we’re talking family: He asks about my mom, my son’s job, or my daughter’s wedding. He shifts to his parents, to Cari’s accomplishments at Berkeley, Scott’s graduation or what Michael just did with the computer or in a game. He talks about Nancy. There’s happiness and pride in his voice—the tension’s gone—he sounds more like Mississippi.

He hits me up to buy something the kids are selling—from Girl Scout cookies to candy Easter eggs. I am extravagant in my purchases.

My own agenda kicks in: Can Leigh find an article I need? (It’s quicker than going to the library.) Would he check this one statistical analysis? Does he know a house painter? He promises phone numbers and references.

On his feet, urging me to check my electronic mail, renamed LEIGH mail by our friend Lorraine, he turns to go—then stops, and, shaking a finger at me, inquires in detail about my health. Not quite satisfied, he says, “All right, Baker,” (he hasn’t called me Eva in ten years) and disappears. In a flash—he’s back, dropping off the article I asked for and the one he says I really should want. I hear him stop next door. Later, his voice is fainter, down the hall.

1 Remarks from Leigh Burstein’s memorial service, July 10, 1994.

Robert Linn...from page 1

leave a gaping intellectual hole in the Center for Research on Evaluation, Standards, and Student Testing to which he contributed so much and, more broadly, to the field of educational research. The many of us who were lucky enough to know Leigh and enjoy his friendship cannot avoid the grief, but can be thankful that he so enriched our lives.

1 Remarks from Leigh Burstein’s memorial service, July 10, 1994.

CRESST Waves...from page 12

research interests and areas of expertise include cognitive development, alternative assessment, and instructional reform. He received his Ph.D. in education psychology from UCLA.

Geno Flores

CRESST welcomes Geno Flores as the project coordinator for the Social Studies-History Assessment Development Laboratory of the National Board for Professional Teaching Standards. He is working with CRESST project director Lynn Winters in the development of assessment and support materials for national teacher certification in social studies-history. Prior to joining CRESST, Flores was a middle school and secondary school history-social science teacher in San Luis Obispo County, California. Since 1989, he has served on the History-Social Science Assessment Advisory Committee for the California Assessment Program (CAP) and for the California Learning Assessment System (CLAS) as it developed the statewide assessment in history-social science. In 1990, he was appointed to the Curriculum Development and Supplemental Materials Commission, which serves as an advisory body to the State Board of Education. In November, 1994, Flores was elected as chair of the 1994/95 California Curriculum Commission.

Journal Highlights CRESST Authors

A special issue of Journal of Science Education and Technology (Issue 1, V4) features work from several CRESST researchers. Eva L. Baker, CRESST/UCLA and Harry O’Neil, Jr., CRESST/University of Southern California, co-author the article Computer Technology: Futures for the Improvement of Assessment. Gail Baxter, University of Michigan, is the author of the article Using Computer Simulations to Assess Hands-on Science Learning. The special issue edited by David Kumar and Sheila Tobias is available by calling Plenum Press at 800-221-9369.

Evaluation for a New Century: A Global Perspective

An international evaluation conference, jointly sponsored by the Canadian Evaluation Society and the American Evaluation Association in cooperation with the Australasian Evaluation Society, the Central American Evaluation Society, and the European Evaluation Society, will be held from November 1-5, 1995 in Vancouver, British Columbia. Send papers by April 6, 1995 to Karen Stierhoff at: kas@wimsey.com; fax (604) 253-9533. Or contact John McLaughlin, (804) 225-2089; fax (804) 371-8593. Advanced registration is $150. For more information about the conference contact the conference secretariat, c/o Events by Design #601 - Howe St., Vancouver, British Columbia, Canada, V6C 1Z7. (604) 669-7175 or fax (604) 669-7083.
New CRESST Staff

Ron Stevens

CRESST welcomes Ron Stevens as the newest member of its research staff. Receiving his Ph.D. in microbiology and molecular genetics from Harvard University, Stevens conducted research on immune abnormalities at the UCLA Medical Center for 12 years. In 1987 he became coordinator of the microbiology and immunology medical course and became interested in alternative assessments, focusing on computer-based learning. Over the past 9 years, he has worked on the Interactive Multi Media EXercises (IMMEX) problem-solving software system. IMMEX creates complex problem-solving scenarios in multiple science disciplines as a supplement to traditional testing techniques. The IMMEX software won a Masters of Innovation Award from Zenith Data Systems and has been archived in the permanent collection at The Smithsonian Institute.

As part of a UCLA School of Medicine outreach program to Los Angeles, Stevens is principal investigator of a $2 million teacher enhancement grant from the National Science Foundation. The program will train over 400 Los Angeles teachers to adapt the IMMEX problem-solving software for their classrooms.

Charlotte Higuchi

CRESST is pleased to welcome teacher Charlotte Higuchi as the project director for the Language Arts Standards Project. (See New Stuart Foundations Grant, page 2.) In 1967, Higuchi began teaching as a reading specialist in urban Los Angeles. Spending much of her twenty-year teaching career at the elementary school level, Higuchi has taught a diverse range of students: bilingual, limited and no English proficiency, physically challenged, and gifted.

In September 1986, Higuchi returned to UCLA beginning her first formal research project as a fellow of the UCLA Teacher Researcher Program. Her initial study laid the groundwork for a $30,000 research grant from the American Federation of Teachers where she examined selected existing performance-based assessments and developed others at an elementary school in East Los Angeles. Since 1992, Higuchi has been a CRESST teacher-researcher and full-time teacher. Her use of performance assessments at the classroom level was featured in the CRESST video, Assessing the Whole Child.

David Niemi

CRESST welcomes David Niemi as a project director on a variety of CRESST studies including assisting the state of Hawaii to develop new state performance assessments, and research on world class standards in geography.

Niemi’s past work has focused on the design and scoring of performance assessments in mathematics, history, and other school subject areas. Having conducted numerous large- and small-scale studies exploring the assessment of “deep understanding” across the curriculum, Niemi has published book chapters, papers, and training manuals on this topic.

Niemi’s research is informed by extensive teaching and administrative experience, which includes teaching elementary school, high school English, and special education. His

(see CRESST Waves, page 11)