The California Educational Research Cooperative (CERC) of the School of Education, University of California, Riverside, was established in 1988 as a joint venture designed to bring educational professionals and researchers together. CERC is a partnership among the Riverside and San Bernadino County Offices of Education, 19 local school districts, and the School of Education at the University of California, Riverside. Organized around representatives from each member district, the Research Planning Council sets CERC's research agenda in the pursuit of five goals: collaborative identification of research, planning, and development needs; educational decision making through data-based problem solving; training for professional leadership; direct support for school systems; and creation of a regional data system. Following messages from the University of California's chancellor, dean of education, and CERC director, the document presents information on the partnership's mission and goals; research cycle and agenda; organizational capacity; and information dissemination, presentation, and partnerships. Core research conducted by the partnership in the following areas is summarized: combination classes, cultural diversity, parental choice, marketing research and school-community relations, the School Dropout Project, year-round education, and Systemic Approaches to Student Success (SASS). Findings of member and special research are presented for: (1) "Evaluation of Three Projects for the East San Gabriel Valley Regional Occupational Project"; (2) "Implementing Assessment Alternatives: Leadership Views and Works-in-Progress at California Assessment Collaborative Pilot Projects"; (3) "Inland Empire Beginning Teacher Support and Assessment Program"; (4) "Impact of Special Education Pre-Referral Intervention Activities and Alternative Assessments on Ethno-Linguistically Diverse Students"; (5) California Postsecondary Education Commission's study, "A Community of Learners: Mathematics and Science Education for Native American Students through Partnership and Collaboration"; and (6) "Statewide Mentor Teacher Program Evaluation Project." The document also contains a fiscal summary and lists of CERC's revenues and expenditures, publications, sponsors and members, and faculty and staff. (LMI)
CALIFORNIA EDUCATIONAL RESEARCH COOPERATIVE

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Prepared by:
Jane L. Zykowski
Susan Hill, Editing
Mary Ann Stewart, Format
Relevancy and application of teaching and research are rightfully receiving increasing attention in the American agenda. I am very pleased that the University of California, Riverside and CERC colleagues are leaders in this national movement.

Education today faces problems as pressing as any in its history. If we are to address them, we must not only think and say, we must do. The CERC model—collaborative work linking research and scholarship at the University with practical implementation at school board and schoolroom—is a model we are finding useful to emulate in other areas of the campus as well. The Graduate School of Management, the College of Engineering, and the College of Natural and Agricultural Sciences all have programs to extend the University into the professional communities they serve. We have found that, as a result, both research and practice are improved.

The CERC model symbolizes the two-way street of applied research and service. Practical problems in the community enrich the CERC research agenda. These new and relevant research tracks provide the inspiration and guidance of our research enterprise. And, of course, the results of that research have many practical benefits. The continued support of CERC by the school districts it serves attests to the effectiveness of this collaboration. It is a tribute to CERC that this "buy in" by those it serves continues to survive in this period of financial stringency.

CERC continues and thrives with support from its component parts because its work is of proven and continuing value.

Raymond L. Orlich
Chancellor
By emphasizing the relationship between research evidence and how it is utilized by teachers, I do not want to minimize a second and very important aspect of the CERC collaborative. That concerns the relationship which exists between UCR faculty and researchers, on the one hand, and superintendents on the other. Some of our research, after all, is intended primarily to serve the needs of superintendents and board members. In that regard, our work on School Choice comes to mind. Since its creation, CERC has become an organization of superintendents and researchers, a place where superintendents and researchers could interact to better understand schools and communities. Together, we have shared educational insight, thereby benefiting both superintendents and researchers. Inspiration and leadership have become the sometimes tangible and sometimes intangible outcomes of this unique collaborative undertaking. To be sure, what one derives from the collaborative relationship has much to do with the level of engagement by the partners. Given the provocative nature of the research questions, lack of engagement is rarely a problem.

Finally, I want to share with our CERC partners the satisfaction I get in knowing that CERC is a genuine cooperative undertaking involving educators in the schools with educators at UCR. We have a relationship—one that involves a mutual concern for the well being of our colleagues. We never have been a research subscription service, nor do we ever intend for our cooperative to become that.

Economic and political pressures make it more imperative than ever for us to produce educational improvements for our communities and in ways which achieve unparalleled efficiencies in our operations. I hope that the coming year finds all of us inspired to do important things with our schools, staffs, and students.

Irving G. Hendrick
Dean, School of Education
In the past, I have devoted my Director's Message column to summarizing developments in the CERC organization and research conclusions during the preceding year. This year, however, I want to devote this space to reflection on an event of signal importance to California schools that took place during this past year. I am referring to the scuttling of the California Learning Assessment System (CLAS) testing program, one of the most disappointing and troubling events of the last several years. The loss of CLAS is painful on several levels. First the CLAS testing program represented the first really substantial shift in thinking about how to assess children’s learning in nearly half a century. To their credit, CLAS designers sought to move educational assessment dramatically away from its behaviorist roots and toward a cognitive psychological framework. That is, they attempted to reconceptualize learning so that thinking rather than remembering would be seen as the hallmark of high achievement in our schools. It is hard to overstate the importance of this change. Where earlier testing programs invited both teachers and students to approach learning as a matter of mastering content, the new CLAS test aimed

at having them wrestle with the mastery of problem identification and problem solving processes. In our information age, the amount of really important knowledge is doubling every few years—no one can keep up by merely remembering the most important facts and information. Indeed, we have developed electronic information storage and retrieval systems that are both faster and more efficient than the human mind. For the twenty-first century, our children must be prepared to find, sort and evaluate information, not just to recall it for display in response to test demands. Children in the next century must be empowered to apply themselves to uniquely human processes—to developing an appreciation of the significance of information and to learning processes for its retrieval, analysis and application to the improvement of the human condition.

A second reason to mourn the lost of CLAS testing is what it means for our ability to monitor the performance of school programs and policies. While CLAS testing had not fully addressed important issues of reliability, it did respond to crucial issues of assessment validity. As a recent Los Angeles Times report on project LEARN has noted, without reliable and valid measures of student learning to serve as a yardstick of educational attainment, educators and parents are left to vagaries of popularity and personal satisfaction to guide their choice of school programs and practices. Program development without proper assessment would not be so risky if there were not such widespread belief that schools are seriously deficient in their ability to produce the learning students need in order to be successful adults. With no letup in political pressure for school improvement, reform and restructuring, we are in danger of making hasty decisions to adopt attractive or
school programs and practices. Program development without proper assessment would not be so risky if there were not such widespread belief that schools are seriously deficient in their ability to produce the learning students need in order to be successful adults. With no letup in political pressure for school improvement, reform and restructuring, we are in danger of making hasty decisions to adopt attractive or expensive changes that are unproductive or even destructive to the long-term interests of our children.

Another reason to regret the demise of CLAS lies in the problem this poses for intelligent research into problems of educational policy and practice. Ultimately, educational research is aimed at helping redesign schools in ways that improve student learning and development. It was with a view to analyzing the impact on student learning outcomes that CERC has undertaken research on such diverse issues as Year-Round Education, Combination Grade Classes, Class Size, Grade-to-Grade Promotion and Systemic Approaches to Student Success.

Overcoming the losses that have resulted from the disappearance of the CLAS testing program will require time, political will and continued deep thinking about the student learning outcomes we wish to assess and how we can come to trust the results of any assessment system. CERC is committed to continuing to monitor the development of student assessment in our public schools. We know that reliable assessments will have to include respect for the individuality and privacy of students and their families. We also know that they will have to include effective ways for students to display a growing capacity for complex thinking and problem solving.

The CERC research agenda has recognized that sound assessment is crucial to effective school. We have followed the development of a variety of alternative assessment processes—including portfolios and performance task assessments—during the last four years. We have followed teacher responses to new assessment designs, and are studying how they can use new assessment techniques to improve instruction. But the crucial issue facing California schools is the creation of technically sound and politically sustainable systems of assessment that will establish a common yardstick for measuring school program performance as well as individual student success. The system has to be usable by teachers, understandable by students and their parents, and convincing to community leaders and policy makers.

Douglas E. Mitchell
Director
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The California Educational Research Cooperative (CERC) of the School of Education, University of California, Riverside, was established in 1988 as a joint venture aimed at bringing educational professionals and research scholars together. CERC is a unique partnership between the Riverside and San Bernardino County Offices of Education, 19 local school districts and the School of Education at the University of California, Riverside. Cooperative membership represents approximately 425,000 students or 5% of California's school population. Organized around representatives from each member district, the Research Planning Council (RPC) is the Cooperative's primary structure for setting its research agenda in the pursuit of five broad goals:

1. Collaborative Identification of Research, Planning and Development Needs
2. Educational Decision Making through Data-Based Problem Solving
3. Training for Professional Leadership
4. Direct Support for School Systems
5. Creation of a Regional Data System
Core Research Projects evolve through a series of steps graphically depicted in the figure above. Each step engages CERC's Research Planning Council (RPC) and Research Staff in a variety of collaborative activities. These activities include:

1. Brainstorming activities resulting in research concept papers.
2. Monitoring, refining, and implementing research designs.
3. Advisory reading of draft reports.
4. Quarterly review of reports on the progress of research.
5. Disseminating research findings in conjunction with the county offices of education.
Research Agenda

Types of Projects Undertaken by CERC

Core Projects
Selected by RPC. Funded by CERC district membership fees and University contributions.

Membership Projects
Contracted and individually funded by CERC member districts.

Special Projects
Contracted and funded by non-CERC member organizations.

CERC's research agenda focuses on its Core Research Projects. Core Research Projects are those projects chosen by consensus of CERC's Research Planning Council (RPC). Core Projects include:

- Combination-Grade Classes
- Cultural Diversity
- Marketing Research and School/Community Relations
- Parental Choice
- School Dropout
- Systemic Approaches to Student Success
- Year-Round Education

Additionally, members may contract on an individual basis for research, evaluation, planning, and consultation services. Member Research Projects are specifically designed to meet the needs and interests of CERC member school districts.

CERC Special Research Projects are conducted for nonmember agencies and school districts under standard University of California contract procedures.
CERC's Core Research Projects form the nucleus of the organization, and Member and Special Research Projects have then contributed to producing multifaceted benefits over the past five years. As demonstrated by the successful completion of more than 165 research, evaluation, planning, and development projects, CERC has developed capacity and expertise in the following areas:

- Survey Technology
- Program Evaluation
- Management Information Systems
- School Finance
- Student Assessment
Linking research findings to improvement of school programs and policy is a major goal of the Cooperative. In consultation with Research Teams, Dissemination Task Force leaders, Aletrice Martin, Riverside County Office of Education, Dennis Mobley, San Bernardino County Superintendent of Schools Office, and Linda Wisher, Moreno Valley Unified School District, are continuing to implement the 1994-1995 Action Plan activities include the following:

- The airing of CERC "Research Made Relevant" Videos to local educational television channels.
- Discussion of the advantages of CERC membership with the Superintendents of nonmember districts.
- Research Made Relevant Presentations to member District Administrative Teams and ACSA Region 12 Conference attendees.
- Expansion of the Dissemination Task Force to include Directors of Instruction, Principals and Teachers.

Members of the Dissemination Task Force are: Duane Covrig, Beth Higbee, Douglas Mitchell, Dennis Mobley, Flora Ida Ortiz, Linda Wisher, Aletrice Martin, Ron Franklin, and Jane Zykowski.
LOCAL PRESENTATIONS

- CERC Faculty and Staff have made numerous presentations to School Board members and Superintendents' cabinets on:
  - CERC: Its Mission and Work
  - CERC Research Made Relevant
  - Parental Choice
  - Combination Grade Classes
  - Retention in Grade
  - School Dropouts
  - Year-Round Education

- The California Commission on Teacher Credentialing, spring 1995. The Inland Empire Beginning Teacher Support and Assessment Program.

- Phi Delta Kappa, Riverside California Chapter, spring 1995. The Inland Empire Beginning Teacher Support and Assessment Program.

- Riverside County Superintendents of School, fall 1994. The Inland Empire Beginning Teacher Support and Assessment Program.


- Riverside Community Summit Task Force, summer and fall 1994.


- Presentation on Graduate Course work in Policy Courses for School Administrators at Pepperdine University, Culver City, CA, winter 1995.

- Presentation on Evaluation of the Inland Empire Beginning Teacher Support and Assessment at the Professional Development Center, Los Angeles Unified School District, winter 1995.


STATE PRESENTATIONS

- The Beginning Teacher Induction Network, spring 1995. The Inland Empire Beginning Teacher Support and Assessment Program.


• Commission on Teacher Credentialing Committee on Administrative Certification Standards, summer 1994.

• Workshop on Public Policy presented to the Commission on Teacher Credentialing, summer 1994.

• Distinguished Speaker, Association of California School Administrators, fall 1994.

• Toward a Better Understanding of Interdisciplinary Collaboration and Curriculum Development, fall 1994.

▪ NATIONAL PRESENTATIONS

• Twelfth Annual Effective Schools Conference, Phoenix Arizona, spring 1995. Retention of Students in Grade.


• Presentation on CERC (with Tony Lardieri) to Maricopa County superintendents at Arizona State University, Tempe, AZ, winter 1995.

• Presentation on CERC operations to faculty members at College of Education, Arizona State University, Tempe, AZ, winter 1995.

• Presentation on County Office Organization to the Illinois Association of County Superintendent of Schools, winter 1995.

▪ INTERNATIONAL PRESENTATIONS


▪ PARTNERSHIPS

• California Academic Partnership Program

• California Commission for Teacher Credentialing

• Metropolitan Research Cooperative MERC

• Native American Preparatory Schools

• RIMS Independent Assessment Coalition

• U.C. Irvine/Sherman Partnership Program
CORE RESEARCH

Combination Classes

Class size policies, fluctuating enrollments, and year-round schooling programs have led many schools to form increased numbers of combination classes—an organizational structure in which teachers manage students and curricula from two or more grades for most or all of the school day. These increases have led many stakeholders to question the efficacy of these classes and to seek effective strategies for teaching them. Unfortunately, research on combination classes has not been extensive.

Seeking to address these needs, in October of 1991, CERC elected to study combination classes. The following key questions were among those in the original proposal:

* Are combination classes as effective as traditional single-grade classes?
* What distinguishes effective combination class teachers from their less effective peers?
* How can educators best organize for (e.g., assign teachers and students) and delivery curriculum and instruction to students in combination classes?

During the past three years, five studies have been completed:

* A Review of the Literature on Combination Classes
* Teachers' Views about Combination Classes
* How Elementary Principals Assign Teachers and Students to Combination Classes
* Principals' Views about Combination Classes
* A National Survey of Combination and Nongraded Classes

Below, a few of the key findings from these studies are listed:

* Teachers and principals generally hold negative feelings about combination classes, and they think students should be assigned to these classes on the basis of ability, independence, and behavior to create favorable class compositions.
* Teachers and principals, however, indicate that these student assignment strategies are often not possible in year-round schools with multitrack calendars.
* Teachers report that combinations require extra effort and planning and lead to problems with curriculum coverage and adequate time for instruction and individual assistance.
* Combination teachers use a variety of teaching approaches, but most combine whole-class and two-group formats, most frequently organizing two groups for reading and mathematics and whole-class lessons for social studies and science.
According to principals, they more frequently assign independent and homogeneous students to combination classes than they do to single-grade classes. Principals assign teachers to combination classes on the basis of two criteria: administrative policies (respecting teachers' interests and fairness) and teacher characteristics (respecting students' and parents' interests by placing experienced or expert teachers).

A literal reading of the achievement and affective outcome research generally shows no differences between combination and single-grade classes; however, consideration of findings from observational research, interview studies, and several achievement studies that at least partially control for selection bias, leads to a competing interpretation—that combination classes have slightly negative effects.

The following implications are among those that have been derived from these studies:

* Given the apparent tradeoff associated with combination classes, the negative feelings that principals, teachers, and (apparently) parents have about them, and the likelihood that combination classes have slightly negative effects on student achievement—especially in year-round multitrack schools—policy makers should avoid combination classes whenever reasonable alternatives can be found.

* Principals should consider issues of both equity and effectiveness in assigning students and teachers to combination classes. Assigning well-behaved, independent, and high-ability students to combination classes may be important to ease the teaching burdens, but such assignments may create tradeoffs for corresponding single-grade classes.

* Since many principals or district policies favor administrative over teacher characteristic criteria for the assignment of teachers to combination classes, an important policy consideration appears to be more selective assignments or flexible transfers within a school or district to meet student needs.

* Educational leaders should provide combination teachers extra time to develop curricula, to order supplemental materials, to organize their classrooms, and to communicate fully with parents, students and colleagues. Leaders might also provide combination teachers instructional aides, in service programs, and resource guides that clarify those curricula that hold potential for integrated or thematic units (especially in states where curricula are prescribed and closely evaluated).

* Since parental choice of tracks severely constrains student assignment in year-round multitrack schools, a practice that often leads to differential or segregated tracks, we suggest that policy makers opt for year-round single-track and traditional calendar schools or ensure larger enrollments in their year-round multitrack schools that will decrease the number of combination classes. However, facing year-round multitrack calendars and the need for additional combination classes, principals or site-based teams should be given authority to balance tracks and assign students more strategically.

* Future research should extend exploratory work to larger samples of principals and teachers. Further, research that examines the efficacy of different grouping approaches for accomplishing various goals in combination classes would also be important, as well as research on students' thought processes about combination classes. Moreover, observational research is needed to describe present practice, and methodologically sound experimental studies comparing student achievement in single-grade and combination classes would be instructive.
The following four studies have been initiated and are now at various stages:

* a study of 204 classrooms (52 of which are combinations) that focuses on (a) achievement comparisons with single-grade classes, (b) whether purposive assignment of students (based on ability, independence, behavior) affects the composition nature of their single-grade counterparts, and (c) linkages between achievement and teachers' instructional approaches.

* a 12-state survey of teachers' and principals' views about combination classes

* a study of parents' and students' views of combination classes

* an interview study of "effective" combination teachers to determine their approaches to teaching these classes.

The investigators hope to conduct case studies, a naturalistic observational inquiry, and experimental research to better answer the questions of the study. We also hope to develop models of effective combination class practice, train teachers to use these models, and investigate the effects of implementing these models. This research should contribute to understanding how schools and teachers can better meet the needs of students in these classes.

**Cultural Diversity**

Research Team
- Project Investigator Douglas Mitchell
- Assistant Research Educationist Linda D. Scott
- CERC Fellow Aida Quiles
- CERC Fellow Duane Covrig

It is anticipated that the first phase of the *Cultural Diversity Labor Market Study* will be completed by June 1995, when the Labor Market Literature Review will be completed and presented to the CERC partnership at the June 19, 1995 RPC meeting. In addition to reviewing previous research on the performance of the teacher labor market, this review will address pressing issues of recruitment and retention of teachers of color in the Riverside and San Bernardino areas.

The literature review will examine the theoretical foundations of labor market research as they apply to teachers in general and to culturally diverse teachers in particular. We will be studying the literature to ascertain what is known about factors that control the demographic and personal characteristics of individuals who enter and remain in teaching.

Simultaneously, work is going forward on the labor market management information system. This system will enable the CERC research staff to track the entry, retention and exit of teachers of color in the teaching profession within Riverside and San Bernardino counties.

The second strand of the cultural diversity study is *Funds of Knowledge: Negotiating the Boundaries Between Families and Schools*. During the spring of this year, and extending into the 1995-96 school year, research study will be planned and developed. The purpose of this research is to examine the mismatch between the educational resources students and their families bring to schools and the ability of teachers to recognize and value those resources.
Parental Choice

Research Team
Project Investigator Rodney T. Ogawa
CERC Fellow Jo Sargent Dutton

The research team is completing its survey of parents' attitudes toward school choice. To date, data from five of the seven participating districts have been collected and analyzed. The following is a summary of the preliminary findings.

Procedures
CERC's research staff developed the parent survey based on input from the project advisory team. The survey was pilot-tested on approximately 100 parent volunteers. The final survey was translated into Spanish.

Ten percent of the classrooms in seven districts schools were randomly selected to participate in the study. The district offices distributed and collected surveys. The results reported here are based on the analysis of responses from 2561 parents in five school districts, reflecting a 38 percent response rate.

Demographically, the sample of parents who responded to the survey breaks down as follows. Parents fell into the following ethnic categories: 208 African Americans (8.1%), 210 Asians (8.2%), 559 Latinos (21.8%), 56 Native-Americans (2.2%), 1,253 Whites (48.9%) and 188 Others (7.3%). One hundred and eighty-eight parents (9.0%) did not report ethnic background.

In general, parents responding to the survey were evenly distributed across income categories: 154 (20.1%) earned less than $20,000; 601 (23.5%) earned $20-40,000; 607 (23.7%) earned $40-60,000; and 545 (21.3%) earned more than $60,000. Finally, parents fell into the following education levels: 169 (6.6%) graduated the eighth grade, 658 (25.7%) graduated high school, 886 (34.6%) attended college, and 742 (29.0%) graduated college.

Key Findings
The survey focuses on several key topics and issues. In this report, we focus on the following: 1) how parents voted on Proposition 174, 2) parents' satisfaction with their children's schools and school districts and 3) the likelihood that parents would participate in intra-district choice programs, utilize interdistrict transfer programs and employ vouchers to enroll their children in private schools.

Proposition 174
In November 1993, California's voters defeated Proposition 174, the school voucher initiative. Of the parents who responded to CERC's survey, 51 percent did not vote. Of those who did vote, 55.2 percent voted "No," while 44.8 percent voted "Yes."

Parent Satisfaction
Generally, parents reported that they were satisfied with their children's schools: 29.5 percent gave their school an "A"; 48.6 percent gave their school a "B"; 18.4 percent gave a "C"; and just 3.5 percent gave a "D."

Parents reported somewhat less satisfaction with their school districts: 19.0 percent gave their district an "A"; 47.2 percent gave a "B"; 27.6 percent gave a "C"; and 6.2 percent gave their district a "D."

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Attitudes Toward Types of Choice Programs
The percentages of parents reporting that they are "Likely" or "Very Likely" to participate in choice programs is relatively high. Fully 87.0 percent of parents reported that they are "Likely" or "Very Likely" to participate in choice programs in their current school districts.

Fewer parents, 50.9 percent, indicated that they are "Likely" or "Very Likely" to take advantage of inter-district transfer programs if they were available.

Finally, fully 68.3 percent of parents reported that they are "Likely" or "Very Likely" to use a voucher, if available, to send their child to a private school.

Choice and Satisfaction
The grade that parents give to their child's school is positively associated with the likelihood that they will participate in intra district choice programs. That is, the higher the grade they give, the more likely they are to participate.

The opposite holds for inter-district and voucher programs. Both the grade that parents give to their child's school and the grade they give to the school district are negatively associated with the likelihood that they would take advantage of interdistrict transfers or use vouchers to send their child to a private school: Parents who are less satisfied are more likely to employ inter-district transfers or use vouchers.

Choice and Demographics
The percentages of parents reporting that they are "Likely" or "Very Likely" to participate in intra district programs does vary significantly across ethnic groups, ranging from highs of 89.6 percent of African-Americans and 89.0 percent of Whites to a low of 80.9 percent of Asians. Similarly, the percentages of parents indicating that they are "Likely" or "Very Likely" to employ inter-district transfers range from highs of 63.7 percent of Native-Americans, 62.3 percent of Asians, and to a low of 45.3 percent of Whites. Finally, the percentages of parents reporting that they are "Likely" or "Very Likely" to use vouchers to send their children to private schools range from highs of 80.0 percent of Native-Americans, 75.1 percent of African-Americans to a low of 65.5 percent of Whites.

Level of family income is significantly associated only with the likelihood that parents will participate in intra district choice programs not with the likelihood that they will participate in inter-district transfers or voucher programs. Parents with higher incomes, with the exception of the highest income group, are more likely to participate in intra district programs as reflected in the percentages of parents indicating that they are "Likely" or "Very Likely" to do so: 88.6 percent of parents earning more than $60,000; 90.2 percent of parents earning $40-60,000; 86.2 percent of parents earning $20-40,000; and 83.6 percent of parents earning less than $20,000.

Level of parent education is significantly associated with the likelihood that parents will participate in intra district programs and use vouchers, but not with their likelihood to seek inter-district transfers. Parents with more education are more likely to engage in choice programs in their home school district, as reflected in the following percentages of parents reporting that they are "Likely" or "Very Likely" to do so: 89.5 percent of college graduates, 89.6 percent of parents who attended college, 84.0 percent of high school graduates, and 73.9 percent of parents who completed the eighth grade. Similarly, parents with more education, with the exception of college graduates, are more likely to use vouchers to send their children to private schools, as reflected in the following percentages of parents reporting that they are "Likely" or "Very Likely" to do so: 87.7 percent of college graduates, 73.5 percent of parents who attended college, 87.6 percent of high school graduates and 60.6 percent of parents who completed the eighth grade.
Professors Mark Hanson and Walter Henry have concluded CERC's multiyear project on school/community communications. Based on the findings of the research, it is believed that institutions will be able to develop more effective two-way communication with their local school communities.

This study was separated into two phases: school-to-community communications and community-to-school communications. The first phase of the Marketing Project focused on the development of a marketing diagnostic tool (Market Rating Instrument) used to analyze 594 written communications from 12 elementary, middle and high schools and district offices. Several technical reports, publications, and presentations have been made on phase one findings. Three major factors contribute to the quality of written communication:

- Appearance (eye-catching layout and use of illustrations)
- Writing clarity (mechanics, depth of detail)
- Imaginativeness (creative and courteous language)

Additional findings can be found in CERC's technical reports Educational Marketing and the Public Schools: Policies, Practices and Problems, and Written Communication and the Marketing of Public Schools.

The second phase of the School Marketing Project focused on opinions of parents, registered voters, teachers, and administrators in three participating CERC members' districts. The study involved a survey which sampled more than 2,700 parents, eliciting their opinions on: (1) the type of information desired, (2) the channels of communication that are preferred, (3) the type of information currently received, and (4) by what channels the information is currently received. The ethnic distribution among the 1545 returned questionnaires indicate a fair representation of the ethnic distribution (Black, Hispanic, Asian, and Anglo) of the total population of the parents in the districts sampled. Analysis of the data provided an overall picture of the communication process and suggested insights into areas where the process can be strengthened. A final report is available.

Professors Hanson and Henry prepared two workshops for CERC participants interested in the knowledge and skills associated with educational marketing. The first workshop focused on improving school/community communication practices, and the second dealt with developing district-wide educational marketing strategies.
School Dropout Project

Research Team
Project Investigator Don MacMillan
Co-Project Investigator Irving Hendrick
Assistant Research Educationist Rita Hemsley

When the California Educational Research Cooperative "Characteristics of Dropouts" video was produced (1993), a "care" factor was stressed as a key element in keeping students in school. This care factor is embodied in any relationship perceived by a potential dropout as significant and positive. This caring relationship can be operationalized by anyone or number of significant persons in the potential dropout's life, but is usually developed between the at-risk student and parents, teachers and/or peers who value education.

At the annual CERC conference last year, we presented a comparison of dropout rates of different student groups. While each of these CERC products has generated confirmation of what practitioners' experience daily, we also heard a desire and need for more and new information about the characteristics of high-school dropouts. The third and final run with these data responds to that request. The attention given to the collection and management of these data has produced one of the richest longitudinal data bases in the country on the profiles and characteristics of high school students prior to dropping out. In this wealth lies great complexity, however, and thus many years have been spent in data management, conditioning, analyses and interpretation. While publications will continue to spin from this rich data set, this year marks the end of CERC's involvement in this project. Following is an abstract of CERC's third and last report to the membership. Those interested in pursuing these data beyond CERC's commitment should contact Irving Hendrick, Co-Principal Investigator of the project.

History & Data Set
First, a brief revisit to the design and sample involved in the project is in order. Starting in 1988, this federally funded project, tracked the entire ninth-grade population in two large districts for five years. The original sample size for the project totaled 5,510 students. As the project coordinator, CERC Assistant Research Educationist, Rita Hemsley, conducted the yearly surveying of all original students in the study as well as of those students who entered the districts during the course of the project. Instruments administered included those profiling attitude and self-concept measures as well as a student characteristics questionnaire. Data were also collected from the districts' Data Processing offices, completing a data profile of the student with such dimensions as grades, attendance, behavior records, and achievement test scores.

A commonly expressed belief among high school educators is that identifying the at-risk student is not the battle. Rather, the battle lies in preventing those expected to drop out from dropping out. Numerous creative and effective prevention programs fight this battle. The following analysis focuses not only on profiling who is most likely to drop out and when, but also within that profile (or prevention program), what are the characteristics of those who do drop out compared to those who don't.

The following report is made on students in one participating district (initial n = 3,267). Ns vary with analyses in that not all students had complete data on all variables of interest for the years of interest (ranging from 1,430 to 1,697). Survival curve analyses were used to determine that a student was most likely to drop out after spending two years in high school (median survival time
Theory drove the selection of instruments and variables; customary and perfunctory screening procedures (descriptive statistics and analysis of variances) were also followed in the selection of the independent variables for the following analyses. Factors selected from the Student Characteristic Questionnaire are as follows: peer influence, relatedness of school to future success, students' attitudes toward education, parents' attitudes toward education, parents' education level. The mean of the eleven self-concept dimensions from the Self Description Questionnaire (SDQ) created a composite self-concept score. Grade Point Average (GPA), age, gender, and ethnicity were also included. When appropriate, a composite variable was created from the average of the variable over two years.

**Findings**
Logistic regression was used, with dropping out after two years in high school as the dependent variable and the above-described independent variables. Due to multicollinearity among several of the independent variables (GPA and self-concept, in particular) three models were tested separately in order to yield independent and meaningful odds ratios.

- Students with a low self-concept are almost four times more likely to drop out than students with a higher self-concept
- Students with negative peer influence are 40% more likely to drop
- Students with lower personal attitude toward school are 30% more likely to drop
- Older students (more than one year older than normal) are 70% more likely to drop
- Students with GPAs less than 1.5 are 3.59 times more likely to drop than A students
- Males are 10% more likely to drop than females
- Asians are 78 times less likely to drop than whites
- Blacks are three times more likely to drop than whites
- Hispanics are four times more likely to drop than whites
- Parents' education DID NOT influence the decision to drop
- Students with parents who have a low attitude toward school are 60% more likely to drop

**Discussion**
While the above findings allow us to categorize and group students based on their odds of finishing school, we cannot clearly ascribe a cause for dropping out of school. Do students who drop out of school lack the self-concept to "talk" themselves into staying? Do they have more awareness into their aptitudes and choose to excel in areas other than school? Do they lack the parental "care" factor, and no other meaningful relationship has filled that gap? Perhaps.

It is clear that each dropout may ascribe his or her departure decision to any multitude of reasons or events. What is not clear is why students experiencing the same events choose not to drop out. Perhaps one explanation lies in the mechanisms used to interpret events with self-concept being one of those mechanisms. If self-concept were thought of as a filter, it could be considered as a barrier to "protect" the psyche from negative experiences and thus keep one from reacting to negative experiences. The weave of the filter expands as self-concept lowers, and the weave tightens as the self-concept increases. A lower self-concept allows negative events to pass through and impact decision making. If the self-concept filter allows negative events to penetrate the behavior of an individual and there is not a significant individual expressing a "care" factor to help the student with his/her problem, it is quite possible that the student will decide to leave school. Logically, it follows that schools which have programs and/or personnel in place to assist students with their perceived problems should notice some improvement in the probability that students will persevere in school.
A Summary of Year-Round Education Research

Research Team
Project Investigator Jane Zykowski

Overview
Faced with rapid student population growth and decline in state revenues, members of the California Educational Research cooperative wanted answers to school housing alternatives such as double sessions and year-round education (YRE). Year-round education became one of five major research projects initially funded by the Cooperative.

CERC members were interested in answers to three questions:

1. Does the conversion from traditional to year-round calendar operations cost or save money?
2. What are the major concerns of students, parents and school personnel when transitioning from traditional to year-round calendar operations?
3. Does the conversion from traditional to year-round calendar operations affect student achievement?

To answer these questions, a review of literature was conducted (Zykowski, Mitchell, Hough, and Gavin, 1991). Over 300 articles, testimonies, and self-reports revealed the fact that proponents and opponents of the year-round school movement often identify similar issues but draw opposite conclusions from data available. This is the conundrum of year-round education.

Research is poorly designed. Most data have been gathered from "in-house" surveys. The seminal research work on year-round schools was conducted by the Stanford Research Institute in 1976-1979. Headed by Dr. Henry Levin, the Stanford team studied the transition from traditional to multi-track year-round calendars in the Pajarro Unified School District (Pevalin, 1978). They addressed similar questions to those delineated above. The Pajarro study served as the research model for CERC's investigation of year-round schooling.

Does the conversion from traditional to year-round multitrack calendar operations cost or save money?
A cost comparison model developed by the CERC YRE Research Team, allowed team members to compare the differences in per pupil line item expenditures on traditional and year-round calendars in 18 California schools. These costs were then compared to the avoided costs of constructing a new school. Potential costs and savings factors ranged from -$66.80 to $+342.67 (Zykowski, Mitchell, and Dick, 1993) per pupil.

Potential savings in per pupil expenditure accrued in four ways:

(1) Avoided classroom construction costs
(2) Uncompensated workloads
(3) Health Benefit savings
(4) Curriculum materials
Six potential cost factors were identified:
1. Administrative and/or Staff Increases
2. Transportation Costs
3. Program Costs (Duplication of Programs Across Tracks)
4. Facility Modification and Equipment
5. Planning and Training
6. Start Up Activities

What are the major concerns of students, parents, and school personnel when transitioning from traditional to year-round calendar operations?
In 1992, a survey was developed by the CERC YRE Research Team to assess the social and organizational issues of concern to students, parents, and school personnel when schools change from traditional to multitrack year-round calendars. The survey also sought to shed light on an assumption found in the literature on year-round schooling—length of time in year-round is a direct indicator of satisfaction with year-round school. A total of 3,901 surveys assessing physical, personal, personnel, and home/community issues were completed. Respondents include 2,453 students in grades four through twelve, 1,252 parents, and 196 school personnel in varying stages of multitrack year-round implementation.

Survey findings reveal the fact that students, parents, and school personnel have basically the same group of concerns in terms of year-round education (Zykowski, Hemsley, and Zhu, 1994). These are:

1. Issues related to education achievement
2. Personal issues such as child care and vacations, and
3. School organization issues such as the number of combination grade classrooms and school schedule changes.

Testing the hypothesis found in the literature that length of time in year-round is a direct indicator of satisfaction with year-round produced interesting results. As can be seen in Figure 1, for all groups, the length of time has a curvilinear relationship with satisfaction and year-round school. With no time and only one to two years time in year-round, satisfaction on all three factors was high. After three years in the year-round program, all groups become less satisfied.

**FIGURE 1: Experience and Satisfaction with Year-Round School Students, Parents, and School Personnel**
Does the conversion from traditional to year-round calendar operations effect student achievement?
A review of literature comparing student achievement in year-round schools with traditional year schools presents mixed results.

No significant difference in achievement is reported by the Stanford Research institute, the California State Department of Education, and the Los Angeles City School District. Increases in achievement are reported by Oxnard Unified School District, Buena Vista City Public Schools and McCluer High School in Virginia. (Zykowski, Mitchell, Hough and Gavin, 1991).

Although conflicting achievement effects are reported, most reviewers conclude that there does not appear to be harmful achievement effects when students attend year-round schools. Due to lack of resources needed to mount a methodologically sound research design focused on the achievement effects of year-round schooling, this piece of the research has been delayed.

Related Research on the Organization of Classes in Multi-Trackerd Schools
Cooperative faculty has just completed several special research projects focused on achievement of students by track and in combination classroom—a phenomena exacerbated by multi-track scheduling. Preliminary findings reveal that multitrack calendars eliminate the principal’s flexibility to make purposive decisions about manipulating an important factor in classroom teaching and learning—classroom composition. They can also produce achievement differences between tracks.

References

- Systemic Approaches to Student Success (SASS)

Research Team
Project Investigator Rita Hemsley
CERC Fellow Joan Black

I. An overview of the Purpose or Questions Addressed
The Systemic Approaches to Student Success research team is addressing global questions which educators face daily:

1. How do systems work most effectively for each student to succeed?
2. What elements within each system (school, classroom and home) influence student success?
II. Description of Activities / Methods for Obtaining Results

SASS will be designing several measures and incorporating existing measures to examine the elements within systems that influence student success. This is a multiphase project; first an instrument will be designed; then a survey at both the school and student level will be conducted.

In Phase I, through summer, 1995, SASS will explore the literature and conduct a survey of the current research and practice in systemic approaches in education and successful interventions with students. This literature review will aid in the identification of elements that can be (examined) observed, measured and documented in schools' existing programs. These elements will guide the creation of an evaluation rubric aiding in the development of a survey instrument to be used in Phase II. One of SASS's goals for this first phase is the creation, piloting and administration of a survey based on the rubric.

Phase II will involve analysis of the survey data and the selection of "extreme" cases to be further studied and observed to understand systemic contributions to student success. Using survey results from Phase I, we will identify extreme settings. To validate the instrument, the SASS project will select and train district personnel to conduct further surveys of their and others environments at both the school and classroom level. District personnel will utilize their training to examine the quality and level of implementation of successful elements in their own settings.

In Phase III, SASS will link the findings from Phase II with student success as measured by academic achievement and social competencies.

Systemic Approaches to Student Success
Theoretical Model

School
→ District Governance
→ Leadership
→ Culture and Climate
→ Demographics

Home
→ Demographics
  • Education, Structure, Economics
→ Parental Beliefs, Attitudes, & Expectations
→ Culture / Environment
  • Involvement
  • Interaction

Student Success

Classroom
→ Leadership
→ Environment
  • Social
  • Academic
→ Curriculum & Instruction
  • Design
  • Delivery
  • Classroom
III. Summary of Findings Thus Far.

To date the SASS project has met with and been informed by both academic colleagues' perspectives and our cooperative's practitioners' insights and concerns. It is apparent that SASS is exploring areas of great concern for practitioners. They express urgency and high interest in delivery of appropriate services for all children, both those at-risk and those for whom expectations are more positive. The monumental nature, importance and relevance of this undertaking have been acknowledged by all persons connected to the SASS study.

IV. Implications for Future Policy and/or Practice.

SASS hopes to inform our constituency, the County Offices of Education and the twenty-one member districts, regarding elements that contribute to the achievement of success for students. The SASS project will examine the systems of school, classroom and home, their systemic coordination and cooperation as well as their separate contributions to student success. The current direction in educational policy such as Goals 2000 and Every Student Succeeds is toward an informed integration of services for students with increasing emphasis on parental involvement in all aspects of education. The SASS project is timely and responds to the membership's need to understand the importance, impact, and value of systemic coordination of services in the classroom, school and home. This research may illuminate some of these issues at a very pragmatic level.
MEMBER AND SPECIAL PROJECT RESEARCH

- Evaluation of Three Projects for the East San Gabriel Valley Regional Occupational Program

Research Team
Project Investigator Rita Hemsley

ESGVROP combines the resources from multiple federal funding sources to support a large, longitudinal data set on all graduates from 17 career education programs. CERC has recently redefined its evaluation position at ESGVROP, assuming a new role of Director of Research for all of ESGVROP research and evaluation needs. This shift provides training, guidance and direction to ESGVROP staff and allows ESGVROP personnel to resource the data collection and data conditioning process. As the Director of Research, CERC provides the assistance necessary for ESGVROP to meet the evaluation requirements specified by the funding agencies of four National Grants, three of which are highlighted in this document.

School-to-Work. ESGVROP school-to-work programs are deemed a National Demonstration project, due to student successes documented thus far. Although CERC has been involved in evaluation of ESGVROP for more than five years, CERC recently restructured the sampling design to further establish group differences. Specifically, research groups were stratified by sophomore GPA, ethnicity and gender. Random sampling procedures were followed to match a control group with the distribution of ROP students on sophomore GPA, ethnicity and gender. A final n of 550 students was included in the study, 275 in each comparison group.

This past year these data from the Apparel Marketing program were used for ESGVROP’s first Program Effectiveness Panel submission. In this document, four claims about students receiving the Apparel Marketing career training (treatment group) were made. For these students receiving career training from the ROP, data are indicating they are more likely than students in the matched comparison group who do not receive any training to:

- Graduate from High School
- Receive Post-Secondary Education
- Secure Employment
- Have Upwardly-Mobile Jobs

Each of the four claims made by the program is supported with the data, with a statistically significant, as well as meaningful, difference between the treatment and comparison groups. That the differences are consistently in favor of the treatment group is most encouraging and exciting. Following is an excerpt from the PEP document, describing these differences:

- The first claim, that more students in the ROP would graduate from High School, was substantiated with the most dramatic group differences of all comparisons. The High School graduation rate of students receiving ROP training was 92%, significantly higher than the 65% graduation rate of the students in the matched comparison sample. The average graduation rate of the six participating schools is 64%, confirming the representativeness of the control, or matched comparison, sample.
A second claim is that students receiving the ROP treatment will pursue Higher Education more often than those in the comparison group. More than 65% of the students receiving ROP training pursued some form of higher education, compared to only 44% of the students in the Control group.

The third claim is that the Treatment group would find employment more frequently than the comparison group. The Treatment group was employed 23% more often than the Control group.

Of the students with jobs, the fourth claim was that those in the Treatment group would enjoy more upwardly mobile positions than those in the comparison group. The data substantiated this claim, with almost twice as many ROP students holding upwardly mobile positions as in the comparison group.

While not one of the original research hypotheses, an additional meaningful finding is the increase in ROP students' grades. As described above, students in the Treatment and Control group were matched on sophomore GPA (mean = 2.01). The mean GPA of the students in the ROP improved to 2.21 ($F_{274\,df} = 8.68, p < .001$) for those students in the Treatment group, while the increase of the control group was only marginal (mean = 2.06) and not significant.

There are at least 16 additional ROP courses involved in the ESGVROP evaluation. Inclusion of data from these other programs is the next step ESGVROP will take to further substantiate the four claims across curricula. Under direction from CERC, ESGVROP is currently designing a system of unique ID numbers for merging and linking data files which will allow the merging of the data from these 16 other programs and follow-up data to contribute to the larger longitudinal data set.

As these enormous data continue to develop, analyses for another PEP submission will begin. This second submission will utilize all the data to address the evaluation questions posed in the Tech-Prep grant. This will entail: 1) imposing a similar sampling procedure as was followed with the Apparel Marketing data, and, 2) the analyses of all ROP class follow-ups. Completion of these analyses is scheduled for summer 1995 and will provide insight into the type of student who enrolls in these programs as well as the differential impact that each program makes on these different profiles of students.

Integration of Academic and Vocational Learning National Grant

Although the focus of the most recent ESGVROP grant is training, its research design also augments the existing data base and supports the basic research design of the other projects at ESGVROP. Funded in January 1994 (although CERC's involvement began in June of that year), the Integration Project staff has been busily producing major documents and training teachers in the integration of academic and career learning. Specifically, six documents cover the following topics in integration: Strategies, Staff Development, Transition, Integrated Activities, Pathways, and Business. Years two and three will include a seventh document on Guidance and Counseling as well as field test and finalize the other six documents.
Last summer, more than 40 teachers from six school districts participated in a five-week summer workshop where they developed more than 50 integrated activities/lesson plans. During the school year, these teachers were provided support by the Integration Project staff and participated in two, 2-day retreats. Two additional summer workshops are scheduled for summer of 1995, expanding the teacher-trainer pool into seven districts, comprising twenty high schools in the East San Gabriel Valley.

CERC's evaluation research questions are:

- Does integrating academic and career curricula increase the likelihood of student: graduation, employment (and quality of employment), and attendance in higher education institutions?
- Does student learning differ when subject matter is taught via an integrated curriculum?

In answering these questions, CERC is providing ESGVROP Integration staff the direction, expertise and instrumentation for training participating instructors in the evaluation of their students' attitudes, motivations, self-concepts, learning styles and academic achievement. Some additional factors addressed in the evaluation model are: administration's attitude toward integration; length of time teachers have taught; teacher attitude toward integration, and; teachers' reported percent of time teaching an integrated curriculum. CERC is also providing ESGVROP with the technology and expertise to develop and scan evaluations of their written documents and summer training workshops.

Los Angeles Area Rehabilitation Workshop and Facility Personnel Cooperative Training Project. The East San Gabriel Valley Regional Occupational Program established the Los Angeles Area Rehabilitation Workshop and Facility Personnel Cooperative Training Project through a U.S. Department of Education award grant in 1992 to develop curricular materials and conduct training of personnel serving disabled populations. The program's goals were to upgrade the skills and knowledge of job coaches and floor supervisors working in sheltered workshops and other supported employment settings with the intent of interesting a significant proportion of these individuals in higher training. The thrust of the training is to move the trainees from a caretaking role to an enabling role. The outcome for the disabled consumers is that they gain the necessary skills and self-confidence to be able to function productively within mainstream employment.

During the first year of the project we limited the evaluation follow-up to a series of questions regarding the success in helping the disabled consumers to get and keep competitive jobs. CERC recently completed the second year evaluation of the program, commending the program for its progress in the areas of Organizational Capacity and Materials Development. Specifically, the program has expanded from one course into four courses, and a curriculum handbook has been developed. This handbook covers more than 10 subjects referenced in the course curriculum. Preliminary and anecdotal data indicate that students trained in this course have reported significant improvements in job satisfaction as well as job stability and upward mobility. Substantive analyses will be conducted on the follow-up data of the students as well as their employers as they become available.
In 1991, the California legislature enacted AB40 allocating one million dollars to fund pilot projects for identification and dissemination of effective alternatives to traditional standardized testing systems. Each pilot project was to represent a consortium of school districts, one was to be designated as the lead consortium and act as the local educational agency for the entire project; the other was to be a satellite pilot. The State Board of Education and the State Department of Education developed guidelines to award grant monies. The lead consortium was to conduct a study of current assessment practices, review and catalogue existing authentic assessment practices, develop a cost/benefits analysis for alternative assessments, and determine effective dissemination programs for sharing assessment information. Additionally, they were to coordinate projects with the state's Subject matter Projects responsible for the reforms reflected in the state curriculum frameworks and to review and recommend changes in existing accountability systems. Finds of the collaborative were to be published annually. CERC was retained for a second year to conduct an independent evaluation of the California Assessment Collaborative (CAC) project's work.

During the second year of funding, CAC pilot projects were urged to clarify project goals, to articulate the outcomes expected and to press to implement assessment alternatives being conceptualized at pilot sites. The twenty-six pilot sites represent all major curriculum areas addressed in the state frameworks, all levels of instruction from K-12, and many types of special programs such as those for second language learners and gifted and talented students.

Pilot leaders were asked to collect a "Works-in-Progress" portfolio for the use of the Collaborative as evidence of ongoing work at the project sites. Portfolios would reflect activities concerning, 1) articulation of content standards, 2) development of meaningful and fair assessments, 3) development of teacher capacity to use assessment to improve instruction, 4) development of student capacity to use assessment to improve learning, and 5) determining and monitoring consequences of assessment processes and outcomes.

**Conduct of Second Year Independent Evaluation Study**

The CERC Evaluation team utilized a variety of data collection techniques to prepare for the evaluation report. Data collection activities focused on two issues: the thinking and actions of pilot project leaders and the evolution of pilot project operations as reflected in the "Works-in-Progress" documents were abstracted from project portfolios by CAC staff. The first issue was pursued through structured interviews conducted at pilot sites with project leaders. The second issue was pursued through systematic content analysis of the "Works-in-Progress" documents to develop a working empirical view of the dimensions of assessment reform actually being implemented across the twenty-six pilots.
Pilot Project Leader Interviews
Analysis of the pilot project leaders’ overall interpretations of alternative assessment brought them into focus once it was recognized that the fifteen projects fall into five distinctive clusters based on the assumptions and aspirations leaders hold regarding the nature and purposes of alternative assessment development. Viewed from the perspective of the leaders’ differing conceptualizations of what alternative assessment means and how it is most appropriately pursued, member projects in each of the five clusters can be seen as displaying characteristic tendencies to emphasize specific work themes and characteristic activities. The five groups are discussed in detail in the report 1) the Project Development Group which is characterized by newness and a preoccupation with defining the central focus of their work. This group reveals just how difficult it is to develop a coherent and shared vision of desirable assessment practices in this period of highly politicized school policy and program reform. 2) the Instructional Development Group whose title underscores the fact that they emphasize the role of assessment reform in the improvement of day-to-day instructional practices for classroom teachers. 3) the Culture Development Group who are so named because of their work emphasizing the development of an overall change in the professional cultural beliefs of teachers. 4) the Organizational Development Group who see to link alternative assessment development with broad-based organizational reform and 5) the Technical Development Group who are concentrating on the development of identifiable instruments and procedures.

Evaluation of the CAC “Works-in-Progress” Documents
In this section of the evaluation report a review of the materials found in the twenty-six entries in the CAC’s “Works-in-Progress” portfolio files is done. Various aspects of all twenty-six projects are described in the portfolio submissions but not all five dimensions were addressed by all projects and far more materials were presented on some dimensions than on others. On average, the portfolios contain 50 to 60 pages of material consisting of an eclectic mix of documents, such as performance tasks, rubrics, project newsletters, teacher and student handbooks, etcetera. All documents were reviewed for evidence across the five dimensions developed in the CAC’s first year document titled Charting the Course Toward Instructionally Sound Assessment. The complete framework and analysis is reproduced in the Second Year Evaluation Report.

Overall, there appear to be only a few projects which have been able to describe with substantive detail and systematic approach to monitoring consequences and critiquing those assessment alternatives which have been implemented. There is reason to be concerned about the limited attention given to determining and monitoring assessment consequences in the CAC pilot project work. Concern over consequences was one of the most powerful factors in the political scuttling of the CLAS testing program. So long as consequences are left unattended, it is impossible to know whether an assessment system can maintain the public confidence and political support needed for widespread implementation.
Inland Empire Beginning Teacher Support and Assessment Program (IE-BTSA)

Research Team
Project Investigator Linda D. Scott
Co-Project Investigator Douglas E. Mitchell
Co-Project Investigator Irving G. Hendrick

Seventeen school districts, 57 mentors and 179 beginning teachers are participating in the Inland Empire Beginning Teacher Support and Assessment Program (IE-BTSA). Five out of eight cycles of support and assessment training for mentor teacher support providers and beginning teachers were completed by February of 1995. Participants improved their understanding of the IE-BTSA support and assessment system, implemented the use of the data-gathering forms and instruments, and received training and support in three expert teacher roles: Organizer, Instructor, and Professional Learner.

In addition, the IE-BTSA collaborative, consisting of the Riverside County Office of Education, (RCOE), the San Bernardino County Superintendent of Schools Office, (SBCSSO), the schools of education at the University of California, Riverside (UCR) and the California State University, San Bernardino (CSUSB), hosted the State BTSA Diversity Training at the Mission Inn in Riverside, November 8 and 9, 1994. Project team members and training teams consisting of mentor teachers and beginning teachers received the training and have completed a successful diversity training for all project mentors and beginning teachers.

The collaborative also hosted the southern region's 1995 Symposium of the California Beginning Teacher Induction Network (BTIN) at the Marriott Hotel in Ontario on February 24, 1995. More than one hundred twenty-five participants attended.

The BTIN is sponsored by the Commission on Teacher Credentialing and the Department of Education to provide a forum for the exchange of ideas and information about the effective induction of beginning teachers. IE-BTSA project team members had the opportunity to present our program, and we were pleased to welcome six other project presentations from the southern region, including the Comprehensive Teacher Education Institute at UCR. A copy of the symposium's program is included. The keynote speaker was Eliot Eisner of Stanford University who spoke on "The School as the Center of Teacher Education." Dr. Eisner is a nationally recognized leader in education and school reform.

On May 5, 1995, the IE-BTSA project team: Linda Childress, RCOE; Dr. Irving Hendrick, Dean of the School of Education, UCR; Professor Douglas Mitchell and Dr. Linda Scott, CERC, UCR and Associate Professors Lynne Diaz-Rico and Ruth Sandlin of CSUSB are invited to present the IE-BTSA project to the Commission on Teacher Credentialing (CTC). At that time we will give an overview of the IE-BTSA model of support and assessment for beginning teachers. We will also have the opportunity to present an interim project progress report including self-evaluation data, and recommendations for the next two-year cycle of funding for which we will be applying in the spring of this year.
Program Evaluation is being conducted on a formative basis and serves to monitor and adjust project support and assessment activities. Upon completion of the current project year in the summer of 1995, summative program evaluation will provide systematic data on the following issues: (1) How can teacher excellence be promoted? (2) How can teacher retention in years 1-3 be enhanced? (3) How can retention be enhanced for teachers of culturally diverse and language minority students? (4) How can mentor teachers develop in areas of interview, observation and confirming skills? (5) Which beginning teacher support strategies are the most effective? (6) Has the program been effective in delivering support to new teachers? (7) Is the program effective relative to its goals? A Training Manual for Mentor Teachers and a complete instrumentation package have also been completed and implemented in the project.

An integrated IE-BTSA information management system is under continuing development, and extensive data bases have been created and used for program forms and instruments. Nine reports have been generated, copies of which are available from CERC.

- **Impact of Special Education Pre-Referral Intervention Activities and Alternative Assessments on Ethno-Linguistically Diverse Students**

Research Team
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**Perspective:** The over-representation of ethno-linguistically diverse students in public school special education programs has been of long standing concern to educators (Barona and Faykus, 1992; Messick, 1984). In order to respond to charges that identification and placement procedures are biased against ethno-linguistically diverse students—and to discover to what extent these biases are actually operating in public schools today—a three-year study was conducted cooperatively by the California Department of Education and the California Educational Research Cooperative (CERC), University of California, Riverside to examine the feasibility of modeling the flow of students into California's Learning Handicapped programs by tracing the knowledge and actions of elementary school site educators as they identified students as problem learners, developed and used pre-referral interventions to ameliorate identified problems, and assessed ethno-linguistically diverse students for placement into special education programs.

**Methods and Techniques:** The study was conducted to determine whether it is feasible to identify the parameters of school contexts, teacher beliefs, and student characteristics controlling the identification of problem learners, pre-referral interventions, and special education placement system based on actual practices of elementary school educators. The study was conducted in two stages. **Phase One** addressed the impact of demographic, individual student characteristics, teacher beliefs and school climate factors on the identification of students as problem learners and program decisions resulting from pre-special education referral interventions. **Phase Two** addressed the question of formal assessment and special education certification and issues relating to the level of agreement between traditional and alternative assessments to determine students' eligibility as Specific Learning Disabled (SLD).
In the Phase One study, the project study team composed of California Department of Education consultants and researchers from CERC, University of California, Riverside, identified eleven elementary schools from three urban school districts in southern California that met eight established criteria, namely, that the schools: (1) serve kindergarten through sixth grade; (2) have in place a Child Study Team (CST); (3) provide services, special programs and curricula and instructional strategies for at-risk students; (4) use alternative assessment procedures; (5) serve an ethnically and linguistically diverse school population; (6) employ a school staff that has satisfactory training and experience; (7) have staff assigned to the school for at least one year; and (8) have on staff a school psychologist trained in alternative assessment procedures. In the Phase Two study, one hundred forty students, kindergarten through grade six, identified as problem learners and whose learning problems were not ameliorated by the pre-special education referral interventions, were included in the Phase Two study. All students in the Phase Two study were assessed by a certified school psychologist. The students were assessed using traditional assessment procedures and alternative assessment procedures. Each student was processed by a team of school professionals to determine his/her eligibility for special education as Specific Learning Disabled (SLD).

**Data Sources:** An instrument and form development team of experts from CERC, University of California, Riverside, and California Department of Education developed and field tested data collection instruments designed especially to assess the pre-referral and assessment practices occurring in California's elementary schools. Prior to performing the data analysis, data reduction and scale development of the large number of measured variables were conducted to develop manageable factors and constructs for study. Data that were processed include teacher views, student difficulties, school leadership rankings, school socio-economic status, and assessment data reflecting the assessment practices and decision-making procedures actually occurring in the schools as ethno-linguistically diverse students are evaluated for special education placement.

**Results:** The broad question addressed by the study asks: Is it feasible to model the process of pre-referral intervention and assessment in such a way that we can account for the work flow through which ethno-linguistically diverse students pass as they move from point of initial recognition as problem learners to certification and placement into special education programs? The overall flow of students into special education programs (as modeled in the diagram shown) traces the contact between school staff and students as they move from: (1) initial placement into regular classrooms through, (2) identification as problem learners, (3) review by school-based Child Study Teams, (4) formal referral for eligibility assessment, and...
(5) certification as eligible for special education services. Options for special treatment during the work flow system include: (a) special help provided by teachers, (b) reassignment to other classrooms, (c) pre-referral planned by Child Study Teams, (d) placement in special programs and services, (e) return to the classroom as ineligible for service, and (f) exit from special education because need has been met. Though this study was not designed to examine exit from special education programs of students who are re-assessed and found no longer to need services, this important feature of the system may have significant impact on the ethno-linguistic makeup of each school's special education population.

Five broad conclusions are supported by the findings in this study. They begin with the recognition that school level social dynamics are more important than assessment techniques in determining student need and program eligibility, and end with an acknowledgement that special education programs are so deeply embedded in the day-to-day operations of public schools that they cannot be expected to respond quickly or substantially to the leadership actions of individual school principals. More specifically, the identified model of the special education pre-referral process demonstrates that over-representation of specific population groups is the consequence of social system properties rather than the result of specific assessment procedures or instruments used to certify students for placement. School professionals have significant difficulty understanding and accepting the current definition of who should be served by the Specific Learning Disabled (SLD) special education program as it is defined in California law and regulations. As implemented, traditional assessment procedures, clinical judgements and alternative assessment procedures produce substantially different results—certifying very different proportions of students and altering significantly the particular individuals found eligible for placement. The overall operation of the Special Education Work Flow System exhibits significant biases in the identification and placement of various population sub-groups. A small bias toward over-representation of African Americans and under-representation of Asian Americans was found. A somewhat larger bias toward over-representation of students with limited English language proficiency was also found. The most prominent bias, however, was that toward over-representation of males. Males out-number females three to two at the point of identification as problem learners, and displayed a stark four to one ratio at the point of referral for formal assessment. Principal leadership did not show a direct impact on the rate or nature of problem learner identification or special education referral. Leadership influence over the processes affecting identification and servicing of learning handicapped children appears to operate indirectly through the establishment of a positive school climate and the development of student assessment and Child Study Team (CST) procedures that classroom teachers value and trust.

**Educational Significance of the Study:** Based on the findings and conclusions supported by this feasibility study, recommendations for improving the sensitivity and reliability of special education pre-referral interventions and program placements are suggested. Policy recommendations are developed to: (a) monitor and control the biases leading to over-representation of various population sub-groups, (b) encourage training activities aimed at redirecting professional educators toward more effective and equitable uses of student intervention programs, (c) establish procedural and substantive standards for improving program effectiveness, and (d) define research and development activities intended to assure continued improvement in the quality and effectiveness of special education services for public education.
Introduction

Since the release of *Indian education: A national tragedy, a National challenge*, the implementation of the Indian Education Act of 1972 (Title IV of the PL. 29-318, as amended) and congressional action designed to carry out the recommendations of the study, there has been "limited but significant progress in the education of American Indians and Alaska Natives" (1991, *Indian Nations at risk: The first 500 years*). The same report describes a number of programs, nationwide, aimed at improving Indian education in the areas of preschool preparation, tribal community colleges, service integration to promote Indian student health, educational leadership programs, state boarding schools, as well as Minnesota state initiatives in support of Indian education, a culture-based language and technology program, an interagency experience-based career/vocational program—high school through postsecondary, adult education and dropout reentry programs, and the Zuni Public School District, the only Indian-controlled public school district in New Mexico created expressly for an American Indian tribal group. The report, *Indian education: A federal entitlement, 1992 Annual Report of the National Advisory Council on Indian Education, Washington, D.C.*, lists six Indian Education Showcase Projects in the areas of 1) language development, 2) integrated studies across the curriculum, 3) community-based tutoring, 4) parent school partnership program, 5) American Indian teacher training programs, and 6) a school-within-a-school program. Much remains to be done.

The CPEC Planning Grant

*From the beginning, I had in mind an eagle and wanted it to be in my tessellation because to me an eagle means freedom. Freedom to just do anything. It also gives me pride to be a Native American and also be an American. An eagle seems to be on the top of everything with a straight thinking mind. They got space and great knowledge that remind me of my Grandpa. Not only does it mean pride, and freedom, it's also the National Bird.*

(An eighth-grade student, writing on his mathematics project, Native American Intertribal University Preparatory Program, UC Irvine, summer, 1993)

In the fall of 1994, CERC member Sherman Indian High School (SIHS) together with UC Riverside, School of Education, submitted a grant proposal to the California Postsecondary Education Commission (CPEC) as part of the agency's ninth-year grant competition. Funded by CPEC, this $48,081 planning grant has as its focus the conceptualization, design and writing of a multi year implementation proposal centered on understanding and developing a community of learners' concept at SIHS, with a focus on mathematics and science education. This project was initiated under the guidance of Dr. Irving Hendrick, Dean of the UCR School of Education and Ken Taylor, Chief School Administrator, SIHS. The Principal Investigator for this project is Dr. Linda Scott, CERC Research Educationist, with Co-Directors Dan Kenley, Core Curriculum Coordinator, SIHS and Mark Smith, CERC Research Fellow.
The objectives of the planning grant is as follows: 1) establish an interagency collaborative to identify mutual concerns regarding the teaching of mathematics and science for Native American students; 2) plan collaboratively for professional teacher development in mathematics and science with SIHS faculty; 3) plan for an improved process for teacher self-assessment using the Inland Empire Beginning Teacher Support and Assessment model; 4) plan an infrastructure for cultivating an SIHS Learning Community dedicated to continuous learning/renewal through self-improvement, self-assessment, recommitment to educational goals and collegial support, and 5) establish the role of Teacher as Mentor to Student as a priority for mathematics and science education.

An interagency advisory group composed of educators and students who represent science and mathematics teaching and learning for Native American students at the secondary, community college and university levels will be convened in April of this year. The SIHS School Board provides tribal, parental and community advice and input to the project on an ongoing basis.

A literature review to identify effective learning community programs will be completed in June 1995. The review will create a theoretical foundation for constructing a learning community model for SIHS with mathematics and science instruction at its core.

It is anticipated that this six-month planning process will culminate in the generation of a multiyear implementation grant proposal to be submitted to CPEC as part of its tenth-year, 1995, proposal competition.

- **Statewide Mentor Teacher Program Evaluation Project**

  **Research Team**
  - RCOE Project Investigator Linda Childress
  - Project Investigator Linda D. Scott
  - Co-Project Investigator Douglas E. Mitchell
  - Co-Project Investigator Frank Romero
  - Co-Project Investigator Irving Hendrick
  - CERC Fellow Michael Batie

  **Background**
  The California Mentor Teacher Program was adopted as part of the comprehensive reform package, Senate Bill 813, in 1983 and began operation more than ten years ago. At the time the program was created it was hoped that it would help schools retain good teachers, improve the professional skills of both new and experienced teachers, help local districts with a variety of curriculum and instructional development needs, raise respect for the teaching profession, and provide an opportunity for good teachers to contribute to school improvement without having to give up their regular teaching responsibilities. Now that the program is ten years old, it makes sense to conduct an overall evaluation of its operations and its impact on the schools. Relying on CERC's expertise in research and evaluation, Riverside County Office of Education is the local educational agency for a comprehensive study aimed at determining how well the program is working and what if any improvements could be made in it.

  As lead agency for this $85,000 contract, RCOE has overall managerial responsibility. Mrs. Linda Childress is the RCOE Project Director and Dr. Linda Scott is the CERC Principal Investigator. CERC has primary operational responsibility for the implementation of the State Wide Mentor Program Evaluation Project.
Teacher Program Evaluation. Professor Douglas E. Mitchell, Dr. Frank Romero and Dean Irving G. Hendrick complete the CERC study team. An Advisory Committee consisting of a broad spectrum of educators, administrators and legislators is being created to assist in the interpretation of evaluation findings.

Overview of the Evaluation Approach
The evaluation design was developed to deliver the greatest possible insight into the effectiveness of California's Mentor Teacher Program within the limited funds available. Since California schools display very substantial variations in mentor program design as well as local cultural and social conditions, it was important to develop particularly creative and multifaceted strategies for data collection, analysis, and interpretation. The project's central questions include four areas: (1) legislative intent, (2) local design and implementation, (3) integration with other categorical and statewide programs, and (4) recommendations for changes. The evaluative study utilizes four data collection strategies:

a. **Focus group interviews** with mentor teachers in six regions. Data from the focus interviews was used to create a survey instrument closely aligned with professional experience.

b. **The evaluation survey** will be administered to some 12,000 educators in approximately 400 local schools, representing about 135 of California's 1,006 school districts.

c. **Additional focus group interviews** were conducted with mentor teachers at the Burlingame Mentor Teacher Conference to develop deeper insight into various local programs.

d. **In-depth follow-up interviews** will be held with educators, policy makers, and interested citizens, as preliminary findings from the large survey study become available, to focus further data analyses and shape questions of possible program improvement through policy changes.

e. **CBEDS data files** collected over the last ten years will be studied to track the careers of teachers who become mentor teachers. These data will make it possible to determine which teachers tend to become mentor teachers and how they are distributed across the schools.

Data obtained from these sources will be subjected to an integrative data analysis and interpretation process. Technical soundness requires that the qualitative estimates of program implementation be cross validated with quantitative information. Rather than providing one large technical report, the study team will generate four focused reports providing technical documentation and interpretation of major issues dealing with: 1) policy, 2) program implementation, 3) program integration, and 4) program improvement.

In all cases, we will maintain the strictest confidentiality of those who provide us with information—no names of individuals, schools or districts will be used in any reports that we prepare, and none of the personal information we collect will be disclosed to anyone outside the research team.
Six focus group interviews with mentor teachers and administrators were completed in the northern and southern regions of the state by CERC research staff. Interviews at the Mentor Teacher Conference in Burlingame, CA were also completed on March 9 and 10. Results of these regional interviews have been summarized and incorporated into the survey questionnaire.

Analysis of the data collected through the Statewide Mentor Program Evaluation will examine the four areas of concern shown in Figure 1.

**FIGURE 1. STATEWIDE MENTOR EVALUATION PROGRAM GOALS**

<table>
<thead>
<tr>
<th>AREA</th>
<th>GOAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. POLICY</strong></td>
<td>How well is the mentor program meeting the legislative intent to retain exemplary teachers, provide essential training and support to beginning and experienced teachers, and improve curriculum and instruction in the public schools?</td>
</tr>
<tr>
<td><strong>2. PROGRAM IMPLEMENTATION</strong></td>
<td>To what extent have the design and implementation of the local mentor teacher programs been successful in meeting local needs?</td>
</tr>
<tr>
<td><strong>3. PROGRAM INTEGRATION</strong></td>
<td>How well connected is the mentor teacher program to categorical and other statewide programs?</td>
</tr>
<tr>
<td><strong>4. PROGRAM IMPROVEMENT</strong></td>
<td>In order to make the mentor teacher program more effective, what modifications, if any, need to be made?</td>
</tr>
</tbody>
</table>

**Measuring Program Implementation**

One of the most important advantages of the evaluation design is its ability to generate a reliable and valid profile of local Mentor Teacher Program implementation successes. Embedded in the survey questionnaire are small clusters of questions designed to assess six dimensions of Mentor Teacher Program implementation:

(1) To what extent do mentor programs provide direct services to new and beginning teachers?

(2) To what extent do mentor programs provide direct services to experienced teachers for either general professional development or assistance with specific identified problems?

(3) To what extent do mentor programs provide indirect services to teachers by engaging mentor teachers in school or district level curriculum design and development work?

(4) To what extent do mentor programs provide indirect services to teachers by engaging mentor teachers in school or district level instructional improvement activities?
To what extent do mentor programs provide indirect services to teachers by engaging mentor teachers in school or district level student assessment activities and projects?

To what extent do mentor programs provide indirect services to teachers by engaging mentor teachers in school or district level professional and/or administrative service activities?

Using the scale scores from these six sub-scales, the evaluation project will be able to define profiles of mentor teacher program implementation. These profiles will permit an overall description of the types and extent of mentor teacher program implementation across the state, and can be used in statistical regression studies to ascertain which types of local program implementation are producing the greatest impact in terms of: (a) measurable improvement in teacher satisfaction, performance and retention; (b) recognizable improvement in the schools' core activities of curriculum, instruction and assessment of students; and (c) overall improvement in local school and district climates of trust and professional engagement.

To permit the use of the six implementation sub-scales in this predictive way, the questionnaire is designed to include a previously validated scale of school climates, together with opportunities for school administrators, mentor teachers and non-mentor teachers to report their assessments of: professional career satisfaction, school program quality, and mentor teacher impact on school operations.

**Analysis of the Impact of Various Designs**

First, the Mentor Teacher Program has more than a thousand independent implementations across California's schools. These thousand plus implementation sites are legislatively empowered to design local programs that respond to wide variations in local conditions and incorporate substantial variations in the values and goals of the local districts responsible for them. Qualitative focus-group interviews as well as additional interviews are generating the conceptual clarity needed for good survey instrument development will assist in the interpretation of survey data once it has been collected. Major emphasis is given, however, to the design and execution of a survey questionnaire which will produce highly reliable quantitative data that will enable us to describe patterns of Mentor Teacher Program implementation and assess the consequences of alternative program designs.

Second, some important outcome/impact variables are unavailable. Three missing data elements are the most troublesome: school and classroom performance measures, teacher retention data, and longitudinal school and classroom operations information. With the decision to restructure CLAS assessment even before it became fully operational and with the lack of any other standard measure of student attainment, there is no currently agreed-upon measure of school or classroom performance. As a result, we can only estimate whether mentor teacher activities are associated with higher performance by teachers or educational programs by relying on the professional judgments of the educators involved in the various programs. These judgments are important estimates of the impacts under study, but tend to be colored by local circumstances and the limited ability of professional educators to compare experiences across sites.

Third, the lack of teacher retention data is troublesome because this was one of the expressed legislative intents in the Mentor Teacher Program authorization. The data lack is not primarily a matter of not being able to find out whether teachers stay or leave the profession—this could be determined from CBEDS or STRS data rather easily. The problem is finding out why a teacher
leaves the profession, and whether his/her involvement with the Mentor Teacher Program has had any impact on that decision. Our judgment in developing the evaluation design is that studying professional career satisfaction and intention to remain in teaching careers through the survey responses of teachers who are currently employed at school sites is a suitable proxy for direct measures of retention.

Fourth, the last missing variable set concerns longitudinal change in teacher and school performance. No one expects that Mentor Teacher Programs will raise school and teacher performance to some uniformly high standard, only that performance will be substantially better than would occur without successful implementation of this important program. Thus, the best test of mentor teacher influence would be a comparison of early and late data from schools and individual teachers who are being assisted by their work. Within available time and resources, this approach is not possible, however, so we will need to rely on cross-site comparison and self-reports of longitudinal impact to assess these important dimensions of Mentor Teacher Program impact.

Fifth, parents, school board members, senior school administrators, including interested citizens and a variety of policy making groups all have a legitimate interest in the Mentor Teacher Program and could contribute data to its proper evaluation. Serious data collection from these secondary stakeholders would require resources far in excess of those available for this evaluation study. Rather than making a token effort, with a resulting dilution of the resources needed for studying the impacts on school programs and teachers, we propose to accept the limitations on resources and concentrate our effort on the essential study of teachers, mentor coordinators and site administrators. At the point of data interpretation, we will be interviewing representatives of other stakeholder groups in order to be sure that we have viewed the educators' data from all relevant perspectives.

Formation of Recommendations
Rather than preparing a single comprehensive report, CERC staff will prepare four separate focused reports, and provide technical documentation in a separate summary of the evaluation study procedures and data sources. In consultation with key staff members in the California Department of Education (CDE), teacher and administrator organizations, and the California Legislature, CERC will synthesize the qualitative and quantitative data collected into four evaluation reports entitled:

a. "How California's Mentor Teacher Program is Meeting the Needs of Local School Systems," to be prepared by Dr. Frank Romero.

b. "How Effective Mentor Teachers Support Professional Growth for New and Experienced California Teachers," to be prepared by Dr. Linda Scott.

c. "The Integration of Mentor Teacher Programs with Other Local School Programs," to be prepared by Dr. Irving Hendrick.

d. "A Policy Perspective on California's Mentor Teacher Program," to be prepared by Dr. Douglas Mitchell.

These four reports will be prepared for policy makers, professional educators and informed lay persons interested in California education programs and policies. They will be disseminated to major school organizations, and made available to educators and policy makers throughout the state. Additionally, a comprehensive technical report will be presented to the CDE to document the information gathering and data analysis procedures used in the execution of the evaluation study.
# Fiscal Summary

## STATEMENT OF OPERATIONS

For the year July 1, 1993 through June 30, 1994

### Revenue*

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
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</thead>
<tbody>
<tr>
<td>UC Contribution-Salaries</td>
<td>106,147</td>
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<tr>
<td>UC Contribution-Benefits</td>
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<td>Member Fees</td>
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<td>Publications</td>
<td>629</td>
</tr>
<tr>
<td>1994 Conference Registration</td>
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<tr>
<td>Computer Expense Recovery</td>
<td>17,507</td>
</tr>
<tr>
<td>Special Projects**</td>
<td>131,386</td>
</tr>
</tbody>
</table>

**Total Revenue**                   **561,810**

### Expenditures*

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>CERC Core Projects</td>
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</tr>
<tr>
<td>Personnel Salaries</td>
<td>291,071</td>
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<td>Personnel Benefits</td>
<td>73,788</td>
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<td>Travel</td>
<td>18,240</td>
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<td>Meetings</td>
<td>15,664</td>
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<tr>
<td>Printing</td>
<td>25,747</td>
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<tr>
<td>Other Services</td>
<td>21,435</td>
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<tr>
<td>Office and Research Supplies</td>
<td>36,380</td>
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<tr>
<td>Computer and Equipment</td>
<td>45,202</td>
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</table>

**Subtotal**                        **527,527**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Projects</td>
<td>119,362</td>
</tr>
</tbody>
</table>

**Subtotal**                        **119,362**

**Total Expenditures**              **646,889**

### Net Revenue*

**Net Revenue**                     **-86,079**

* Does not include revenue or expenditures for indirect costs.
** Some revenue for Special Projects was received in early 1993 and is not shown on this statement.
CERC Revenue

1993-1994

- UC Contribution: $148,288
- Member Fees: $269,950
- Computer Recovery: $17,507
- Conf. & Pubs: $1,679
- Special Projects: $131,386
CERC Expenditures

1993-1994

Special Projects
$119,362

Salaries
$291,071

Other
$39,675

Printing
$25,747

Supplies & Equipment
$81,582

Benefits
$73,788

Meetings
$15,664
ASSESSMENT AND REMEDIATION

A District Implementation of Performance-based and Portfolio Assessment for Compensatory Education Students
This report describes a pilot project with the Jurupa Unified School District to determine whether portfolio assessment is a viable approach to identifying and providing better schooling to Chapter 1 sixth-grade students. The advantages and disadvantages of a portfolio's use as an individualized assessment tool are discussed in detail.
Catherine D. Colwell and Douglas E. Mitchell

The Cognitive Assessment and Reading Remediation of Chapter 1 Students
This report discusses the pilot of a new assessment instrument and remediation materials. It relates the impact of remediation strategies geared to the remediation of cognitive deficits of Chapter 1 students. Subjects were third graders in Hemet Unified School District. Their gain in word attack skills was approximately two years or more higher than that of their peers.
Jerry Carlson and J.P. Das

AT-RISK YOUTH

Early School Leaving in America: A Review of the Literature
A state-of-the-art look at the "dropout" problem in American between 1940 and 1980.
Irving G. Hendrick, Donald L. MacMillan, Irving H. Balow and David Hough

College-Going Decisions by Chicanos: The Politics of Misinformation
Provides answers for the practitioner to the following questions:
1. Why are the rates for college-going Chicanos so low today?
2. Why are they failing?
3. How can educators reduce attrition of high school students as they make the transition to college?
David Post

School Dropouts—A Staff Development Video
A video tape describing the characteristics of students who do not complete high school. This staff development video provides ideas for intervention strategies for at-risk youth.
Rita Hemsley, Irving Hendrick and James Brown

Retention in Grade: A Failed Procedure
A review of the literature focusing on important issues regarding the practice of retaining students in grade. Research to date shows that retention is not effective and supports promotion with remediation as a more effective alternative.
Irving H. Balow and Mahna Schwager

A Model of Analysis for District Retention Policies—Research Brief
Research indicates that requiring students to repeat a grade level fails to raise achievement or enhance social and personal adjustment. Moreover, it is significantly linked to dropping out. Retention continues, however, supported by public belief and sanctioned by district policy. This paper presents a model to clarify the practice of retention.
Mahna Schwager

Retention in Grade: A Staff Development Package
This is a CERC staff development package for teachers, parents, administrators, and policy-makers. It includes a "user friendly" summary of key issues and several overheads relating to research on the retention of students in grade, conclusions, and alternative intervention strategies.
Jane L. Zykowski, Diane Mapes, Beth Higbee and Benita Roberts

Promotion versus Retention—A Staff Development Video
A video tape review of the detrimental effects of retention of children in grade. Intervention strategies focused on promoting rather than retaining are described.
Beth Higbee, James Brown, Jane L. Zykowski and Irving Balow
CAREER TRAINING

Evaluation of the Riverside County Office of Education Tobacco Prevention Among In-School Youth Project

Students' perceptions about the use of tobacco are reported. Findings are discussed in detail. Among the most significant of these is the fact that fourth and fifth grade students are well aware of the social norms associated with tobacco use. As might be expected, boys and girls hold significantly different views about whether friends will be upset if they smoke.

Douglas E. Mitchell and Jake Zhu

Quality and Effectiveness of California's Regional Occupational Centers and Programs

A study of California's Regional Occupational Centers and Programs (ROC/P) focusing on the operation of these programs in the context of dynamic change.

Douglas E. Mitchell and Jeffrey B. Hecht

A Study of California's Regional Occupational Centers and Programs

Research Brief

An executive summary of the findings of the study on the quality and effectiveness of California's ROC/P.

Jeffrey B. Hecht

Design of a Model MIS for California's Regional Occupational Centers and Programs (ROC/P): Final Report

This report describes the development, piloting and application of a Management Information System which can aid in decision making for course quality analysis.

James C. Dick, Douglas E. Mitchell, and Jeffrey B. Hecht

MIS Supporting Documents

A technical description of the MIS Software developed and piloted for California's ROC/P.

James C. Dick and Jeffrey B. Hecht

ROC/P MIS—Research Brief

A summary of findings from the ROC/P MIS pilot study.

James C. Dick

Evaluation of East San Gabriel Valley Regional Occupational Program’s (ROP) Marketing/Merchandising/Apparel Program Data

An evaluation report on the effective implementation of a vocational education program in Marketing and Merchandising by the East San Gabriel Valley Regional Occupational Program.

James C. Dick and Douglas E. Mitchell

CLASS SIZE

Class Sizes of Selected Courses in Riverside and San Bernardino Counties

A review of student instructional load by gender for each subject and/or single-subject grade taught in California school districts in Riverside and San Bernardino Counties.

Jeffrey B. Hecht

How Changing Class Size Affects Classrooms and Students

A comprehensive review and analysis of research on class size. Provides answers to four policy questions:

1. How much and how reliably do class size reductions lead to increased achievement?
2. Exactly how does changing the student/teacher ratio influence student learning?
3. What are the organizational and fiscal implications of class size and student achievement?
4. What alternative strategies can be found for reducing instructional group size?

Douglas E. Mitchell, Cristi Carson and Gary Badarak

How Changing Class Size Affects Classrooms and Students

Research Brief

A summary of CERC's comprehensive review and analysis of research on class size.

Sara A. Beach

Modeling the Relationship Between Achievement and Class Size

A re-analysis of the Tennessee Project STAR data collected on students in grades 1, 2, and 3 over a period of four years. This report focuses on the interaction of six major forces on achievement when class size is considered.

Douglas E. Mitchell, Sara A. Beach and Gary Badarak
DEMOGRAPHICS

Inland Empire Education Summit Notes
Demographic characteristics of the Inland Empire depicting major stress factors attributed to rapid population growth. These stress factors include: student and family transiency, health risks, family and community pressures, health risks, crime and violence, and the erosion of real resources. 
Douglas E. Mitchell and Duane M. Covrig

MIDDLE LEVEL EDUCATION

Vertical Articulation for the Middle Grades
A review of research literature on middle grade education. Provides a historical perspective and describes the efforts of middle school reformers focusing on curriculum improvement. 
David Hough

Middle Level Education in California:
A Survey of Programs and Organization
A survey of grade-level organizational structures and programs focused on grades 5 to 10. Provides school practitioners with a myriad of organizational structures for the middle grades. Identifies effective practices and programs and makes recommendations founded on current practice in California school districts. 
David Hough

Middle Level Education:
Educationally Sound—Administratively Possible
Research Brief
A two-page summary highlighting the middle school movement and providing a brief description of a survey of middle level programs in California. 
David Hough

NEW SCHOOLS

School Housing for the Schooling of Children
A detailed review of the school building process in California. This report reviews the literature on school construction and identifies key roles and agencies in the building of a new school in California. 
Flora Ida Ortiz

PARENTS AND FAMILIES

A Review of Research on Parental Choice in Education
This review of literature identifies the most prominent types of parental choice programs that have been proposed, adopted, and implemented throughout the nation. Additionally, it reviews the assumptions serving as the basis for educational choice proposals espoused by parents, the community, and state and local policymakers. 
Rodney T. Ogawa and Jo Sargent Dutton

SCHOOL MARKETING

A Plan for Educational Marketing of Val Verde School District
A case study analysis of the communications process in a small school district in the process of unification. This paper discusses one district's attempt to identify and isolate communication problems at the district level. Communication problems similar to those of many districts are identified. A plan for remediation is proposed. 
Tedi K. Mitchell, Douglas E. Mitchell, E. Mark Hanson, and Walter A. Henry

Written Communication and Marketing of Public Schools
Applies a Marketing Rating Instrument (MRI) to written communications from public schools to parents and community members. Identifies problems with written communication and provides basic strategies for teachers, administrators and school staff members to improve written communications. 
E. Mark Hanson, Walter A. Henry and David Hough

Educational Marketing and the Public Schools: Policies, Practices and Problems
A paper focused on analyzing the marketing concept and illustrating its application to public educational systems. Provides answers to the following questions:
1. What is marketing?
2. What organizational forces exist in education to create bridges or barriers between schools and the communities they serve?
3. Why apply marketing techniques to schools?
4. How do marketers contact various segments of the community?
5. How do schools attempt to communicate with communities and vice versa?
A special focus is placed on the communication needs of bilingual parents.
E. Mark Hanson and Walter A. Henry

Parent and Community Satisfaction with Public Education: A Survey of Parents and Citizens in Three CERC School Districts
A report of the degree to which parents are satisfied with issues of schooling. Overall, parents and citizens are satisfied with schools. Differences in satisfaction with the schools are focused on specific issues: ethnicity, socioeconomic status, and voter status.
Douglas E. Mitchell, Kannanayakal Rajan with E. Mark Hanson and Walter A. Henry

SCHOOL RESTRUCTURING
School Restructuring: The Superintendent's View
An analysis of the meanings of school restructuring to 43 school superintendents. Details political and organizational issues considered by school superintendents faced with new reform language.
Douglas E. Mitchell and Sara A. Beach

If Restructuring is the Solution What is the Problem?
A treatise on the ambiguity of the "restructuring" of the public school and the present catchall use of the term. It examines prevailing conceptions of school restructuring and their implications for improvement. Dr. Timar argues that current calls for restructuring echoes past reform efforts, and that restructuring can only succeed as a reform strategy if it addresses the social, political, and ideological contexts that shape educational policy.
Thomas Timar

A Review of Research on Parental Choice in Education
This review describes the assumptions parents and educators make when making choices about schools their children should attend. Describes parents who choose.
Rodney T. Ogawa and Jo Sargent Dutton

School District System Reform. A Case Study of Strategic Planning, Site-Based Management, and Outcome-Based Education in Victor Elementary School District
Douglas E. Mitchell and Jean E. Treiman

SPECIAL EDUCATION
School Staff and Parent Evaluation of California's Resource Specialist Programs
This report details the results of an evaluation of the Resource Specialist Program by more than 23,000 parents and educators in 429 schools in California.
Jeffrey B. Hecht, Gary Badarak and Douglas E. Mitchell

California's Resource Specialist Programs: School Staff and Parent Evaluations Research Brief
An executive summary of the evaluation of California's Resource Specialist Programs by parents and educators.
Jeffrey B. Hecht and Daniel Morgan

Report on the Methodology for the West End Special Education Transition Program Evaluation
A report on the development of a Management Information System to assess the quality of life experienced by special need students as they leave high school.
Daniel Morgan and Jeffrey B. Hecht

The Impact of California's Special Education Pre-referral Interventions and Alternative Assessments on Ethno-Linguistically Diverse Students:
A Technical Report of the Feasibility Study
A report of the validation on effective elements of the special education pre-referral and alternative assessment procedures for ethno-linguistically diverse elementary students in California.
Ronald Powell, Kannanayakal Rajan, Donald Reed and Linda D. Scott
Impact of Special Education Pre-Referral Intervention Activities and Alternative Assessments on Ethno-Linguistically Diverse Students
A technical report prepared for the California State Department of Education describing the findings of a study of the Special Education Pre-Referral Process in several elementary schools in California. Conclusions are discussed in terms of educational significance and policy implications.

Impact of Special Pre-Referral Intervention Activities and Alternative Assessments on Ethno-Linguistically Diverse Students
Research Brief
A summary of findings of a study of the Special Education Pre-Referral Process in several elementary schools in California. Conclusions are set forth in terms of educational significance and policy implications for the practitioner.
Douglas E. Mitchell, Ronald J. Powell, Linda D. Scott and Janet L. McDaid

STUDENT ACHIEVEMENT
CAP: 4-Year Achievement Scores and 2-Year Projection
Jeffrey B. Hecht and Jane L. Zykowski

Teachers' Views about Combination Classes
This study describes the assignment of students to, teachers' feelings about, and instructional approaches used by teachers in combination classes (two grade levels in one class).
DeWayne A. Mason, Robert B. Burns and Jorge Armesto

How Elementary Principals Assign Teachers and Students to Combination Classes
A description of administrative and management strategies used by school principals to assign teachers to combination-grade classrooms.
Robert B. Burns and DeWayne A. Mason

National Survey of Combination and Nongraded Classes
A report on the frequency with which elementary students are assigned to traditional single-grade and non-traditional combination and nongraded classes in states throughout the nation.
DeWayne A. Mason and Janet Stimson

Review of Literature on Combination Classes
This report reviews the literature on combination classes. It distinguishes between two types of combination classes (administrative and developmental) and identifies studies that have examined this organizational structure. Findings are synthesized. Results and conclusions are presented as implications for policymakers, practitioners and researchers.
DeWayne A. Mason and Robert B. Burns

TEACHER TRAINING
California's New Teacher Project: A Policy Perspective Summary
Research Brief
An executive summary of the project from a policy perspective which discusses and defines support for beginning teachers. Gives specific intervention strategies which school organizations and teacher training institutions could implement to support new teachers.
Douglas E. Mitchell and David L. Hough

YEAR-ROUND EDUCATION
Implementation of Year-Round Operations in the Middle School
A technical report detailing the assessment of parent, staff, and student concerns with year-round scheduling at the middle school. Describes an implementation plan for addressing these concerns and a Master Scheduling Plan to equalize attendance tracks. Achievement effects are discussed.
Jane L. Zykowski and Rita Hemsley.
Year-Round Education Feasibility Guidelines
A series of worksheets developed to assist districts in assessing the capital, operational and transition costs of conversion to year-round school operations. Patricia Matthews, Jane L. Zykowski and David Hough

A Review of Year-Round Education Research
This state-of-the-art review of literature focuses on the fiscal, social, and achievement impact of multi track year-round school operations. The most comprehensive review of year-round education literature since the early 1970s. Jane L. Zykowski, Douglas E. Mitchell, David Hough and Sandra E. Gavin

Year-Round Education: A California Phenomenon—Research Brief
A summary of the year-round school movement in California over the past three decades. Jane L. Zykowski, David Hough and Douglas E. Mitchell
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Faculty

Douglas E. Mitchell

Professor of Education and CERC Managing Director. Douglas Mitchell has been on the faculty since 1972. His major teaching interests in educational policy, social science theory and school politics have stimulated research and professional activity in the areas of education policy formation and implementation, organization and control of school systems, labor relations, teacher incentives, citizen influence, and school politics.

Robert Burns

Associate Professor of Education and CERC Associate Director. He is the Co-Project Investigator for the Combination Classes Research Project with Assistant Professor DeWayne Mason. Professor Burns' research and teaching interests are in instructional theory and educational research.

Rodney Ogawa

Professor of Education and CERC Associate Director. His major teaching interests are organization theory and leadership theory. He has completed research on school board decision making and is beginning research on school-family relations.

Ron Franklin

CERC Liaison, Ronald E. Franklin, has a major responsibility for linking the theoretical aspects of CERC research to its membership and practicing educators.

E. Mark Hanson

Professor of Education and Director of CERC's Educational Marketing Project. Professor Hanson's research interests in the organization and administration of schools, organizational theory and educational change make him a natural to head the School Marketing Project.

Irving G. Hendrick

Dean of the School of Education, Professor of Education, and Co-Director of the School Dropout Project. Irving G. Hendrick has been on the faculty since 1965. Dean Hendrick brings his research and teaching expertise in the history of American education; educational opportunities for nonwhite minority groups in the United States, special education and teacher education to the CERC study of the characteristics of School Dropouts in California.

Jane L. Zykowski

Specialist in Education, Coordinator of the Educational Administrative Services Credential Program, and Manager of CERC. Dr. Zykowski managed CERC's year-round education fiscal and social impact studies. Her teaching and research interests include the school principal, organizational change, organizational delivery systems to public schools, and leadership.
CERC Staff

Michael Batie
Education:
Major Emphasis: Physics
Major Emphasis: Education
Work Experience:
Teacher, Elementary, Los Angeles Unified
Research Assistant, Accelerated School

Research Interests:
Educational Ethics, School Culture and
Values in Education
Moral Education: Policy Development and
Implementation
Moral Training

Joan Black, Research Fellow
Education:
B.S., University of Colorado, Boulder. 1976.
Major Emphasis: Education.
M.S., California State University, Hayward. 1993.
Major Emphasis: Cognitive Development.
Work Experience:
Classroom, Museum, and Hospital Educator.
Educator, University of California, Irvine
Reading and Neurolinguistic Clinic.
Board of Directors, University of California,
Irvine. Reading and Neurolinguistic Clinic.
Marketing Professor, Cerritos College.
Research Fellow, CERC. 1993-present.
Research Interests:
Social and Cognitive Development
Parenting; Families
At-Risk Populations
Classroom Environment

Jo Sargent Dutton, Research Fellow
Education:
B.S., University of Southern California,
Los Angeles, CA. 1962.
M.S., University of Southern California,
Los Angeles, CA. 1966.
Major Emphasis: Remedial Education
Work Experience:
Remedial Reading Instructor. 1964-1970.
Adjunct Professor of English, Chaffey
Research Fellow, CERC. 1993-Present.
Research Interests:
Organizational Development
Politics of Education

Rita Hemsley, Assistant Research Educationist
Education:
B.A., University of California, Riverside.
Liberal Studies. French Major and Education
Minor.
M.A., University of California, Riverside.
Educational Psychology with emphasis in
Special Education and Research
Methodology.
Teaching Credentials, University of California,
Riverside, 1988. Multiple-Subject and Special
Education.
Ph.D., University of California, Riverside, 1991.
Exceptional Children with minors in Research
Methodology and Educational Theory.
Work Experience:
Teacher, Valley Preparatory School,
Evaluation Consultant, Integrated
School-Linked Services (Healthy Start)
Research, MacMillan Research Group,
University of California, Riverside.
Lecturer, Guidance in Special Education,
University of California, Riverside.
1993-present.
Assistant Research Educationist, CERC.
1993-present.
Research Interests:
Issues in Special Education: At-Risk Students, Self-Concept, Measuring Achievement, Transition Training Career/Alternative Education; Program Evaluation Psychometrics

Susan Hill, Administrative Analyst
Education:
B.S., San Jose State College, San Jose, CA. 1963. Industrial Relations and Personnel Management, and Business Administration.
Teaching Credential, University of California, Riverside. 1970.
Major Emphasis: Middle School Mathematics
Work Experience:
Interviewer and Supervisor, California State Department of Employment. 1963-1968.
Administrative Analyst, CERC. 1994-present.

Aida Quiles, Research Fellow
Education:
M.A., University of New Mexico, Albuquerque. 1983.
Major Emphasis: Educational Foundations/Art Therapy
Teaching Credential: Bilingual Cross-Cultural Teaching Credential, San Diego State University, San Diego, CA.
Work Experience:
Student Academic Advisor, San Diego State University. 1979-1980.
Graduate Assistant, San Diego State University. 1980-1981.
Child Development Specialist, University of New Mexico Hospital. 1982-1983.
Bereavement Counselor, Omega Program, Massachusetts. 1986.
Massachusetts Correctional Institution, 1986.

Linda D. Scott, Assistant Research Educationist
Education:
B.A., City University of New York. 1969.
Ph.D., University of California, Riverside. 1990.
Major emphasis: Curriculum and Instruction; Teacher Education;
Diversity Issues in Education with an emphasis on Native American Education.
Work Experience:
Supervisor of Teacher Education, Lecturer, University of California, Riverside. 1986-1989.
Assistant Research Educationist, CERC. 1991-present.
Research Interests:
Teacher Education
Multicultural Education
Literacy and At-Risk Students

Mark D. Smith, Research Fellow
Education:
M.S., Virginia Polytechnic Institute & State University, Blacksburg, Virginia. 1988.
Major Emphasis: Mathematics.
B.A., University of Virginia, Charlottesville. 1985.
Major Emphasis: Mathematics.
Work Experience:
Research Fellow, CERC. 1994-Present.
Lisa Soccio, Research Secretary

Education:
B.A., Art History, University of California, Santa Cruz. 1991.

Work Experience:
Department Secretary, Early Childhood Department, San Francisco Jewish Community Center. 1991-1992.
Research Secretary and Microcomputer Support Specialist, CERC. 1993-present.

Mary Ann Stewart, Operations Secretary

Work Experience:
Division Manager's Secretary, Consolidated Freightways, Walnut, CA. 1984-1992.
Secretary/Administrative Assignments, Thomas Temporaries. 1994
Operations Secretary, CERC. 1994-present.

Jean Treiman, Research Fellow

Education:
B.S., California State University, Northridge. 1967.

Work Experience:
Research Fellow, CERC. 1991-present.

Research Interests:
Teacher Education: Administration and Policy Class Size Issues Power, Authority, and Empowerment in Educational Administration

Educational measurement and learning theory.

Jan Blacher

Research Interests:
Principal Investigator for 10-year study funded by the National Institute on Child Health and Human Development pertaining to out-of-home placement of children with severe handicaps—correlates and consequences. Study populations include Anglo, Latino, and African-American samples.

Principal Investigator on study of dual-diagnosis and family involvement. Specific research topics focusing on mental retardation include: family involvement with children in out-of-home placement settings; family stress and adjustment to a child with handicaps and dual-diagnosis; parent-child attachment; severe mental retardation/autism.

Teaching Areas:
Mental retardation (severe handicaps; autism); family influences on development; early childhood/special education; dimensions of exceptionality.

Public Service & Awards:
Recipient of Research Award, American Association on Mental Retardation (Region II); Fellow, American Association on Mental Retardation; Fellow, American Psychological Association; Executive Board Member, American Association on Mental Retardation (Region II); Distinguished Visitor, Faculty of Education, University of Alberta at Edmonton, Fall, 1984.

Robert Burns

Research Interests:
Teaching and instruction.

Teaching Areas:
Instructional theory; educational research.

Public Service & Awards:
Active in consulting with public on mastery learning and outcome-based education.

Jerry Carlson

Research Interests:
Processes of cognitive development; assessment of intellectual functioning; and international educational exchange.

Teaching Areas:
Cognitive development; individual differences.

School of Education Faculty
Public Service & Awards:
Fulbright Hayes Award, 1970-71; Alexander von Humboldt-Stiftung Award, 1974-76 (by government of West Germany); 1987 Outstanding Research Award, Council on International Exchange; Listed in Who's Who in the West; President, International Association for Cognitive Education.

Pamela Clute
Research Interests:
Teaching teachers how to teach contemporary mathematical ideas through an integrated curriculum; women, minorities and mathematics; techniques for developing critical thinking through mathematics instruction.
Teaching Areas:
Mathematics and education.

James Dillon
Research Interests:
Question-answer processes; conceptions of Teaching; group discussion and deliberation.
Teaching Areas:
Curriculum and instruction.

Dan Donlan
Research Interests:
Curriculum and instruction; reading, written composition, reading and writing in the content areas; response to literature; teachers as researchers; the effect of classical music on the spontaneous writing of junior and senior high school students.
Teaching Areas:
English education, literacy and reading, multicultural literature programs.

Sharon Duffy
Research Interests:
Lifespan development; residential and school placement; family and school influences on development of individuals with mental retardation; quality of life measurement; mental health and mental retardation.
Teaching Area:
Mental retardation; Special Education issues.

Jeannette Dulan
Research Interests:
Cultural context of families, religion, and disabilities; multicultural perspectives in teacher education, at-risk students and their families.

Richard Eyman
Research Interests:
Research on mental retardation.
Teaching Areas:
Psychometrics and statistics.

Ron Franklin
Research Interests:
District operation of schools and school districts.
Teaching Areas:
Educational Administration

Public Service & Awards:
Redlands Chapter Phi Delta Kappa 1994 Educator of the Year; 1994 Golden Oak, California State; 1986 Educator of the Year, Marin County; Resolutions of Commendations from Congressman Lewis and California State Legislature both Assembly and Senate.
Frank Gresham
Research Interests:
Social skills assessment and training with children; behavioral consultation; applied behavior analysis.
Teaching Areas:
School psychology; consultation; applied psychological measurement; ecological behavioral analysis; behavior disorders.
Grant Activity:
Professional Association Elections:
Elected Fellow of Division 5 of the American Psychological Association (Division of Evaluation, Measurement, and Statistics).

E. Mark Hanson
Research Interests and Professional Activity:
Organization and governance in American education; management reform in Latin American Educational Systems
Teaching Areas:
Organization and administration of schools, organization theory, educational change.
Public Service & Awards:

Irving Hendrick, Dean, School of Education
Research Interests:
History of education in California; history of educational opportunities provided for non-white minority groups in the United States; history of special education; history of teacher education.
Teaching Area:
History of American education.

Ruth Knudson
Research Interests:
Learning, teaching, and instructional processes associated with English language arts education; teacher education.
Teaching Areas:
Literacy, reading, and writing (including pre-service and in-service teacher education).
Public Service & Awards:
Member, Teacher Education Committee; Local Arrangements Chair, National Reading Conference; Affirmative Action Development Grant; Research Grant, National Council of Teachers of English; Reviewer, American Educational Research Association; Presenter, American Educational Research Association; Presenter, National Council of Teachers. Recipient, Spencer Foundation Grant; "Outstanding Dissertation 1989," American Educational Research Association; Presidential Grant for School Improvement Research Recognition Award, University of California, 1988; Outstanding Student Authored Paper, American Educational Research Association, Division C, 1988; Woodrow Wilson Fellow (University of Wisconsin).

Donald MacMillan
Research Interests:
Factors related to academic and social status of mentally retarded and environmentally at-risk children.
Teaching Area:
Mental retardation.
Public Service & Awards:
Edgar A. Doll Award, Division 33 of American Psychological Association; Associate Editor: American Journal of Mental Deficiency, Exceptional Children;

DeWayne Mason
Research Interests:
Organizational structures, curriculum, and teaching processes in mathematics; instructional leadership.

Teaching Areas:
Curriculum and instruction; middle school education, supervision of curriculum and instruction.

Public Service & Awards:
Principal of Jennings Junior High School, recognized by U.S. Department of Education as a "Distinguished School."

Colleen McMahon
Research Interests:
Applied behavior analytic approaches to problems in childhood; social behavior of child with disabilities; behavioral interventions with pediatric populations; early childhood interventions.

Teaching Areas:
School psychology; behavioral assessment; child behavior interventions; and developmental disabilities.

Kathleen Metz
Research Interests:
Development of children's problem solving and understanding in the domains of science and mathematics; the architecture of children's science and mathematics knowledge; and effective mathematics and science instruction.

Teaching Areas:
Cognition and instruction, especially in science and mathematics.

Public Service & Awards:

Douglas E. Mitchell
Research Interests:
Education policy formation and implementation; organization and control of school systems; labor relations and teacher incentives; citizen influence and school politics.

Teaching Areas:
Educational policy; social science theory; and school politics.

Richard Newman
Research Interests:
Children's learning and cognitive development, achievement motivation, interplay between socialization and cognitive development.

Teaching Areas:
Cognitive development and educational psychology.

Public Service & Awards:

Rodney Ogawa
Research Interests:
Theories of organization and leadership applied to studying schools; school-family relations.

Teaching Areas:
Organizations theory; leadership.

Public Service & Awards:
Membership in American Educational Research Association; Editorial Board member for *Educational Administration Quarterly."

Flora Ida Ortiz
Research Interests:
School careers; socialization processes; and instructional systems and school superintendency.

Teaching Areas:
Qualitative research methods; the school as a social system; role formation in school organizations; and the school superintendent.

Public Service & Awards:
Advisory Council for the National Center for Educational Leadership; Advisory Council for the Center for Creative Leadership; American Educational Research Association Division A Secretary; numerous civic and campus committees.
Reba Page
Research Interests:
Curriculum differentiation in classrooms and schools, particularly as manifested in tracking, and the relation of curriculum to cultural differentiation (e.g., by age, race, social class, etc.).
Teaching Areas:
Curriculum theory, practice, and history; interpretive research methods; secondary education; organizational cultures.
Public Service & Awards:

Judith Sandholtz
Research Interests:
Collaborative teacher education programs; professional development schools; and teachers' experiences in high-access-to-technology classrooms.
Teaching Areas:
Curriculum and instruction; teacher education.
Awards:
Exemplary Teacher Education Program, National Education Association, 1994; Quality of Education/Collaborative Program Award, California Council for the Education of Teachers, 1991.

Linda D. Scott
Research Interests:
Curriculum and instruction; teacher education; diversity issues in education with an emphasis on Native American education.
Teaching Areas:
Curriculum and instruction; teaching literature to children and adolescents; teaching writing to children and adolescents.
Public Service & Awards:
American Educational Research Association; Phi Delta Kappa; Native American Preparatory Schools Curriculum Committee; National Indian Education Association (Sherman Indian High School, Chapter I Tutor); Native American Intertribal University Preparatory Program (NAUP) Leadership Award; Phi Beta Kappa.

Lee Swanson
Research Interests:
Information processing and individual differences; learning disabilities.
Teaching Areas:
Assessment, tests and measurement; learning disabilities.

Thomas Timar
Research Interests:
State and local educational policy; educational policy and culture; educational policy and institutional behavior.
Teaching Areas:
Educational policy and politics; educational policy formulation and implementation; policy and finance.

Jane L. Zykowski
Research Interests:
School leadership; organizational change; consensus management; year-round education; and retention in grade.
Teaching Areas:
Educational administration; organizational theory; school careers, instructional systems and school superintendency.
Public Service & Awards: