Improving K–12 Education
A Multidisciplinary Initiative at Stanford
Among the greatest challenges in the United States today is the need to improve our public education system. The failure to provide effective education to all of our children not only squanders a national resource—our children’s potential—but also widens the gap between those who thrive and those who fail in society. At Stanford, we are working to address this challenge.

Through Stanford’s initiative on Improving K–12 Education, scholars from across the university—from the schools of business, law, medicine, engineering, earth sciences, and humanities and sciences; the Stanford Linear Accelerator Center; and the Hoover Institution—are joining with experts in the School of Education to approach the problem from multiple perspectives. And they are partnering with practitioners and policy makers to forge innovative and practical solutions.

Given the scope and scale of the challenge, the initiative focuses on some of the key issues: developing education leaders, designing effective academic environments that promote learning for all students, and advancing meaningful change by providing rigorous research for policy makers.

Stanford is committed to applying the broad expertise and resources of the university to identify and demonstrate strategies for making fundamental improvements in the way our nation educates its children.
DEVELOPING EDUCATION LEADERS

The evidence is clear and consistent: The most important predictor of student learning in school is the quality of the teacher. To make progress toward improving public education in this nation, we must attract talented and committed individuals to teaching, train them well, and support their continued development and effective practice. We must also develop the entrepreneurial leaders who will drive innovative reform. These goals are central to Stanford’s initiative on Improving K–12 Education.

Attracting and Training High-Quality Teachers

The Stanford Teacher Education Program (STEP), a nationally recognized, graduate-level teacher preparation program, attracts unusually talented and culturally diverse students and prepares them to teach in communities where students and schools have the greatest needs. Though STEP is small relative to other teacher-training programs, graduates have a steady track record of leadership in schools, districts, and educational organizations across the country.

The cost of a Stanford degree, however, is substantial, especially considering the modest level of teacher salaries. In a key early accomplishment of the initiative, Stanford secured funding to help make the STEP program more affordable. The new $20 million Dorothy Durfee Avery Loan Forgiveness Program offers to significantly reduce the burden of student debt for STEP graduates who go on to teach in underserved communities—making it easier for visionary and committed young teachers to follow their passion and help where they are most needed. But they must teach for at least four years to reap the full benefit. Well-grounded research has shown that teachers who stay in the classroom for that length of time are likely to continue in the profession long term. The program was founded by a generous gift from Judy Avery, ’59, and matching funds from the university.

Providing Professional Development

To ensure the continued excellence of established teachers, a key priority of the initiative on Improving K–12 Education is to create a center for teacher learning at Stanford. Combining the depth of discipline-specific knowledge in academic departments across campus and the School of Education’s expertise on teacher professional development, the center will offer powerful programs to help teachers enrich their understanding of subject matter and enhance their pedagogical skills. The center will enable faculty and graduate students from multiple disciplines to build effective and sustainable bridges to K–12 teachers and classrooms.
The center's work will focus initially on science and math education, as well as adolescent literacy across all academic subjects, with special consideration to the educational needs of English language learners. In addition to offering professional development programs, the center will also support the development and assessment of high-quality instructional materials, research on effective teaching, and the dissemination of knowledge on the improvement of educational practice in core subject areas.

To establish a center for teacher learning, funding is needed to support the costs of a faculty director, graduate student assistants, and administrative staff, as well as program expenses such as professional development conferences and workshops.

**Building Entrepreneurial Leadership Skills**

Significant improvements in schools will also require entrepreneurial leaders who are well informed about finance, management, and organizational change, in addition to teaching and learning. Stanford is developing a comprehensive leadership program to provide established and emerging K–12 leaders with the skills and knowledge to drive innovation and improve student achievement.

The foundation of this endeavor is a growing partnership between the School of Education and the Graduate School of Business. A joint degree program allows students to simultaneously earn master’s degrees from both schools, preparing them for careers in school leadership, entrepreneurial ventures, and education management organizations. In a program of Stanford's School Redesign Network known as Leadership for Equity and Accountability in Districts and Schools (LEADS), faculty from both business and education work with a consortium of urban school district teams over a three-year period, helping district leaders improve their ability to drive and support effective district and high school redesign. And a multiyear Principal Fellows program will apply Stanford's cutting-edge expertise—on topics from finance and management to curriculum design and student performance assessment—to strengthen the skills of new administrators motivated to succeed in challenging schools.

With your support, Stanford can expand and deepen these collaborative efforts to develop entrepreneurial K–12 leaders. By connecting experts from the worlds of research and practice, partnerships like these yield benefits to both sides of the equation. Education professionals improve their leadership skills, and scholars derive a better understanding of the challenges facing practitioners. Ultimately, schools and students are the true winners.

**DESIGNING EFFECTIVE LEARNING ENVIRONMENTS**

In our nation today, more than 25 percent of students live in poverty, more than 10 percent have identified learning disabilities, and more than 15 percent are English language learners. The School of Education and the Graduate School of Business are joining hands to create a comprehensive leadership program to help K–12 leaders develop the entrepreneurial skills and knowledge they need to drive innovation and improve student achievement.
learners. It is imperative that we reexamine school organizations, structures, and curricula and design more effective learning environments that provide a high-quality education for all students. Stanford is taking a leading role in this effort, and two examples demonstrate our commitment.

Through the non-profit organization Stanford New Schools, the School of Education runs a K–12 public charter school in neighboring East Palo Alto. The primary goal is to provide high-quality education for students living in a disadvantaged community. But of equal importance is to build on what we learn locally to improve K–12 education in diverse communities across the country.

In the elementary and high school classrooms of East Palo Alto Academy, faculty researchers from across the university and expert practitioners are working together to develop innovative approaches to teaching and learning—including a personalized and sustained advising structure, an early college program, a qualitative grading system, and an extended school schedule. We are able to evaluate the effectiveness of these experimental programs firsthand, document what works, and produce models to share with educators throughout the country, based on what we know helps students succeed.

For this work to have impact on a national scale, support is needed to sustain highly effective student programs, expand professional development programs for local educators, and deepen research and development efforts.

Stanford’s School Redesign Network provides support for districts and schools endeavoring to create small, personalized high schools that meet the educational needs of underserved students. In addition to working directly with schools and districts across the country—from California to Maine and Chicago to Austin—the network develops effective redesign tools, conducts in-depth research, and provides learning opportunities for education professionals, including lectures, roundtables, and summer institutes.

These examples illustrate some of Stanford’s current work to advance the effectiveness of educational practice; we expect new projects to take shape through the university’s newly launched initiative.

**ADVANCING MEANINGFUL CHANGE**

Stanford’s Institute for Research on Education Policy and Practice (IREPP) was founded in 2006 to inform the improvement of education policy and practice through high-quality empirical research. IREPP builds valuable connections with schools, districts, and policy makers to ground its research in the realities of actual school settings. Informed by these perspectives, IREPP research is uniquely designed to provide objective analysis of critical issues and generate knowledge that translates into meaningful improvement in policy and practice.
IREPP draws on the interdisciplinary expertise of nationally prominent scholars from the schools of education, humanities and sciences, and law, as well as the Hoover Institution. Studies focus on some of the most enduring and pressing questions in education policy, such as finance and governance; the training, recruitment, and retention of effective teachers and administrators; the reduction of racial, ethnic, and socioeconomic achievement disparities; and meeting the needs of immigrant students and English language learners.

IREPP scholars work hand-in-hand with some of the most talented graduate students in the country, ensuring that a new generation of policy researchers is well prepared to ask critical questions and find promising solutions—for today and tomorrow.

To educate stakeholders and promote dialogue, the institute is developing a Forum for Effective School Policy and Practice that will allow school leaders, policy makers, and academics to share knowledge, examine mutual challenges, and identify potential evidence-based solutions. The forum and expanded efforts to disseminate research findings will enable IREPP to contribute to a broader understanding of the complex issues facing K–12 education.

Through the initiative on Improving K–12 education, IREPP seeks to increase the number of faculty and graduate students involved in policy research, engage distinguished visiting scholars from around the country, and secure the support to develop a long-term research agenda, independent of the often-changing funding priorities of outside foundations and the government.

SPARKING NEW COLLABORATIONS AND SOLUTIONS

Across the disciplines on the Stanford campus today, there is significant faculty and student interest and activity in projects related to K–12 education. To harness this energy and to stimulate innovative approaches to the most pressing issues in K–12 education, Stanford is developing a K–12 Education Venture Fund program to provide seed funding to interdisciplinary teams of scholars pursuing promising and potentially transformative research and development projects.

For example, the program could support the work of a math scholar and an expert on teaching and learning who team up to develop and assess effective ways to teach algebra to middle school students. Or an organizational behavior expert in the Graduate School of Business might team with faculty in the School of Education working on school reform to design more effective and efficient schools. Such collaborations can be highly productive and offer creative solutions.
This program is based on proven strategies already applied in Stanford’s multidisciplinary initiatives on human health, environmental sustainability, and international peace and security. Nearly 100 seed grants have been awarded through these initiatives in the last few years—supporting new directions in research that are often difficult to fund through traditional sources in their early stages. Several of these pilot projects have grown into much larger collaborations and represent exciting and significant approaches to complex global problems.

Each year beginning in the fall of 2007, the K–12 Education Venture Fund program will invite proposals for projects on teacher professional development, curriculum development, school leadership and governance, and policy related to these topics. Projects will be eligible for up to $75,000 in seed funding, and will be evaluated for the quality of the research plan, rigor of evaluation, and connection to the reality of schools, as well as their potential to have a significant impact on practice, improve educational equity, and be implemented on a larger scale. Projects that warrant further development beyond the first year can apply for larger grants to continue their work. The first year of the venture program has been supported by university seed funding; outside funding is sought to sustain the program and to provide part-time administrative support.

OFFERING OPPORTUNITIES FOR STUDENT LEARNING AT STANFORD

Every year, a wide variety of programs at Stanford offer unparalleled learning opportunities for hundreds of K–12 students. Some, like the Stanford Medical Youth Science Program, are specifically targeted to attract a diverse group of students to careers in the sciences; others, like the Summer Philosophy Discovery Institute and the Summer Institutes hosted by the Education Program for Gifted Youth, explore topics that are typically not part of the standard K–12 curriculum.

Each opportunity connects pre-college students with faculty and students here on campus, exposes students to higher level study, and provides a unique learning experience that could not take place in a classroom. Through the initiative on Improving K–12 Education, Stanford seeks to establish a financial aid fund to help ensure that these programs, like a Stanford undergraduate education, are accessible to students from all backgrounds. In addition, endowment funding is sought to provide long-term stability to the most proven of these programs.
GIVING OPPORTUNITIES
INVESTING IN THE BEST AND BRIGHTEST
At the heart of any great institution are the people whose vision and talent define it. To recruit and retain highly respected scholars devoted to working on practical and interdisciplinary solutions to the problems facing our nation’s schools, Stanford seeks to build the endowment that supports them. Professorships and fellowships are the key to bringing distinguished faculty and the most talented graduate students together in the School of Education, as well as in education-related departments across campus.

PROVOSTIAL PROFESSORSHIPS………………………………… $2.5 MILLION
The provost can award an endowed chair to place faculty strategically in key areas of the initiative. Gifts earn $2.5 million in matching funds, creating a $5 million endowment.

SCHOOL-BASED PROFESSORSHIPS ………………………… $2.5 MILLION
Gifts earn $1.5 million in matching funds, creating a $4 million endowment.*

STANFORD INTERDISCIPLINARY GRADUATE FELLOWSHIPS ………… $500,000
Three-year fellowships can be awarded to outstanding doctoral students who pursue interdisciplinary research in key areas of the initiative. Gifts earn $500,000 in matching funds, creating a $1 million endowment.

SCHOOL-BASED GRADUATE FELLOWSHIPS…………………………… $500,000
Gifts earn $500,000 in matching funds, creating a $1 million endowment.*

*SUPPORTING WORLD CLASS PROGRAMS
Donors can provide critical endowment and expendable support to help faculty across campus build and sustain several valuable programs aimed at improving K–12 education:

CENTER FOR TEACHER LEARNING
SCHOOL LEADERSHIP PROGRAMS
STANFORD NEW SCHOOLS: EAST PALO ALTO ACADEMY
THE INSTITUTE FOR RESEARCH ON EDUCATION POLICY AND PRACTICE
K–12 EDUCATION VENTURE FUND
STUDENT LEARNING OPPORTUNITIES AT STANFORD

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TEACHERS DEEPEN THEIR CONTENT KNOWLEDGE, LEARN NEW TEACHING STRATEGIES, AND CONNECT WITH COLLEAGUES FROM OTHER SCHOOLS AT A PROFESSIONAL DEVELOPMENT WORKSHOP AT STANFORD.