

TELL ME WHY

Recently Funded Grants at the College of Education

DEAN'S OFFICE

Long-term Vulnerability and Resilience of Coupled Human-Natural Ecosystems to Fire Regime and Climate Changes at an Ancient Wildland Urban Interface

Sponsor: National Science Foundation

\$1,500,000

THOMAS SWETNAM (LEAD PI, UA LABORATORY OF TREE-RING RESEARCH) AND SARA CHAVARRIA Provides immersive workshops for teachers in Tucson and Jemez Valley (New Mexico) to develop teaching materials for existing curriculum about the nature of fire and forests in local landscapes.

Processes and Patterns in the North American Monsoon Macrosystem

Sponsor: National Science Foundation

\$2,950,000

RUSSELL MONSON (LEAD PI, UA SCHOOL OF NATURAL RESOURCES AND THE ENVIRONMENT AND THE UA LABORATORY OF TREE-RING RESEARCH) AND SARA CHAVARRIA Provides immersive workshops and field experiences for local teachers to develop teaching materials about the role of scientific models in understanding the North American monsoon macrosystem.

DISABILITY AND PSYCHOEDUCATIONAL STUDIES

National Leadership Consortium in Sensory Disabilities

Sponsor: U.S. Department of Education, Salus University

\$181,531

SHIRIN D. ANTIA AND MARIA CHRISTINA RIVERA Increases the number and quality of doctoral graduates who specialize in the education of deaf and hard-of-hearing, blind and visually impaired, and deaf and blind children. Funds go directly to select NLCSF Fellows who are doctoral students at the 24 consortium universities (including the University of Arizona). Faculty at consortium universities collaborate in offering online consortium courses focused on research

and teacher preparation in the field of sensory disabilities.

Special Education Research and Development Center on Reading Instruction for Deaf and Hard-of-Hearing Students

Sponsor: U.S. Department of Education, Georgia State University

\$550,923

SHIRIN D. ANTIA Identifies variables that influence literacy outcomes in young deaf and hard-of-hearing students from a variety of educational settings; examines child-by-instruction interactions; and develops and field-tests literacy interventions. The Center on Literacy and Deafness is a five-year Special Education Research and Development Center funded by the Institute of Education Sciences. Georgia State University, University of Arizona, University of Colorado at Boulder, and the Rochester Institute of Technology are the universities involved in this project.

High-Need Students Who Are Deaf or Hard of Hearing: Preparing Teachers for the Future

Sponsor: U.S. Department of Education

\$749,940

SHIRIN D. ANTIA AND KATHRYN KREIMEYER Increases the quality and quantity of teachers to serve high-needs, school-age students who are deaf or hard of hearing through a hybrid program that is primarily web-based distance education. An optional listening and spoken language skills specialization is also available.

Rehabilitation Long-Term Training — Master's

Sponsor: U.S. Department of Education

\$747,358

CHIH CHIN CHOU Increases the supply of master's level rehabilitation counselors available for employment in vocational rehabilitation agencies. (The field of rehabilitation counseling continues to face a critical shortage of personnel. The rehabilitation counseling program at the UA is the only higher education institution in Arizona approved by the

Arizona Board of Regents to offer rehabilitation programs of study.) Provides support for student tuition, stipend, and outreach opportunities to attract quality students to join the field.

The Development of Population-Specific Social Support Major for People with Serious Mental Illness

Sponsors: National Institute of Mental Health, San Francisco State University

\$177,998

CHIH-CHIN CHOU AND JULIE CHRONISTER OF SFSU Develops and tests a tailored social-support scale, which is critical to assessment and treatment-effectiveness studies for those affected by serious mental illness (SMI); adds to the current support structures of psychopharmacological and behavioral approaches available to people suffering from SMI.

Technical Assistance Continuing Education IX

Sponsors: U.S. Department of Education, San Diego State University Foundation

\$373,159

WILLIAM DOWNEY Provides training for Arizona's rehabilitation community, delivering three two-day institutes a year — one in Tucson, one in Phoenix, and one in Flagstaff. Topics vary depending on input from participants, typically practitioners from the Arizona Rehabilitation Services Administration, community rehabilitation programs, school transition and special education programs, and tribal rehabilitation programs.

Combined Priority for Personnel Development

Sponsor: U.S. Department of Education

\$499,999

JANE ERIN AND IRENE TOPOR Prepares 30 teachers of students with visual impairments under two instructional models. Student outcomes compared through student follow-up, including documentation of first-year teaching experiences and supervisor evaluations to identify strengths and weaknesses of each delivery model.

AnimalWatch Vi Suite Project

Sponsor: U.S. Department of Education

\$1,204,061

CAROLE BEAL (LEAD PI, UNIVERSITY OF FLORIDA COLLEGE OF EDUCATION) AND JANE ERIN Increases the math competence of students with visual impairments in grades 5-9. Students use an iPad app and accompanying materials to solve math word problems about endangered species, such as the California condor and cheetah. The project team's premise is that by increasing a student's math skills, the student is more likely to be successful in high school math courses and may ultimately enter the STEM fields where, traditionally, there have been fewer individuals with visual impairments and other disabilities.

College Education and Wellness for Veterans with SCI/D

Sponsor: Paralyzed Veterans of America

\$40,000

MICHAEL HARTLEY Building upon the nationally recognized success of a 2012 UA camp funded by the Paralyzed Veterans of America, establishes a second education and wellness camp focused on increasing college access and success for veterans with spinal cord injuries and diseases (SCI/D). Concentrates on resilience and college learning more acutely and supports up to 18 veterans with SCI/D interested in returning to and/or learning about college. Expands the role of the campus Veterans Education and Transition Services Center as a key feature in easing the initial transition for veterans by providing a social base within the larger university community.

AzRSA/IGA Rehabilitation Training

Sponsor: Arizona Department of Economic Security

\$2,023,549

PHILIP JOHNSON Administers an AzRSA scholarship program for AzRSA vocational rehabilitation counselors who have been admitted to the master's degree program with a counseling, rehabilitation, and mental health emphasis.

Provides an opportunity for 10 AzRSA vocational rehabilitation counselors or staff to take selected courses as nondegree-seeking students throughout the academic year and during the summer sessions. Ensures AzRSA counselors or staff have the support necessary to successfully complete the master's degree requirements, become certified rehabilitation counselor-eligible, and provide more effective rehabilitation counseling services for consumers with disabilities.

Project FOCUS: Focusing Opportunities with Community and University Supports (Transition Program for Students with Intellectual Disabilities into Higher Education)

Sponsor: U.S. Department of Education

\$1,828,033

STEPHANIE MACFARLAND AND DAN PERINO (TUCSON UNIFIED SCHOOL DISTRICT) In collaboration with Tucson Unified School District's Community Transition Programs, provides a unique post-high school option for students with intellectual disabilities, ages 18-21. Creates an inclusive program that focuses on academics and instruction, social activities, employment experiences through work-based learning, and internships to lead to competitive employment for young adults with intellectual disabilities, a population that historically has been underserved.

Cultivating Diverse Talent in STEM

Sponsor: National Science Foundation

\$1,499,415

CAROL J. MAKER AND UWE HILGERT (BIOS INSTITUTE) Studies the potential of innovative methods to identify gifted students in STEM, especially among underserved Hispanic and Native American students in Arizona, to increase the number and diversity of exceptionally talented students who have access to interventions that accelerate learning. Partners with Sunnyside Unified School District, Tuba City Unified School District, Greyhills Academy High School, and Shonto Preparatory

TELL ME WHY

Technology High School. BIO5 Institute and Colleges of Education, Pharmacy, and Science compare methods to identify and nurture gifted students in STEM. Students with outstanding GPAs, convincing personal statements, and stellar teacher recommendations participate side by side with students identified with an alternative method in which scientific abilities are assessed through creative problem solving and concept mapping.

Elucidating the Role of Sleep on Glycemic Control and Neurobehavioral Functioning in Youth with Type 1 Diabetes
Sponsor: American Diabetes Association

\$179,965

MICHELLE PERFECT

Examines the relations of sleep parameters to glucose, behaviors, learning, mood, and school performance and whether or not increasing sleep duration leads to improvement in these areas.

Minority Undergraduate Internship for Elucidating the Role of Sleep on Glycemic Control and Neurobehavioral Functioning in Youth with Type 1 Diabetes

Sponsor: American Diabetes Association

\$3,000

MICHELLE PERFECT

Provides mentorship and experiences for an undergraduate student who identifies as Latino to develop research skills and scholarly pursuits as a way to increase participation in research among students from underrepresented groups.

Long-term Training Project: Rehabilitation Counseling-Doctoral
Sponsor: U.S. Department of Education

\$747,318

LINDA SHAW

Supports doctoral training in rehabilitation counseling focusing on the preparation of rehabilitation counseling educators and researchers. Provides traineeships with tuition and stipend support for students who commit to employment in areas with shortages of qualified personnel.

Preparing Professors in Evidence-Based Practice
Sponsor: U.S. Department of Education

\$387,574

JOHN UMBREIT

Prepares six new professors in special education who can develop and promote evidence-based practice in schools throughout the United States. Graduates will have the expertise to develop, examine, and disseminate sustainable practices that result in high achievement and successful

independent living for children and adolescents with special needs. Focuses on both the high-incidence and low-incidence areas of special education, with a specific emphasis on students with disabilities who are at high risk for school failure due to the combination of disability, cultural/linguistic diversity, and high-need status.

UA and Community Outreach Program for the Deaf

Sponsor: Arizona Commission for Deaf and Hard of Hearing

\$219,271

CINDY VOLK

Develops a curriculum for support service providers to work with individuals who are deaf and blind.

Combined Priority for Personnel Development

Sponsor: U.S. Department of Education

\$1,190,687

CINDY VOLK

Provides training for sign-language interpreters to work with deaf and hard-of-hearing children in P-12 settings throughout the United States.

EDUCATIONAL POLICY STUDIES AND PRACTICE

Safe and Supportive Schools Program

Sponsors: U.S. Department of Education, Arizona Department of Education

\$1,483,620

KRIS BOSWORTH

Improves conditions for learning and eliminates barriers to learning in Arizona schools. Decreases bullying and harassment, suspensions for violent incidents, students being offered, sold, or given illegal substances on campus, and violence and risk behaviors. Also focuses on increasing student connectedness to school, positive student-teacher relationships, order and discipline on campus, safety on campus, as well as student referrals to appropriate interventions for substance use.

Strengthening Instructional Leadership in Mathematics

Sponsors: Arizona Board of Regents, Northern Arizona University

\$250,000

ROSE YLIMAKI AND

LYNETTE BRUNDERMAN

Arizona College and Career Ready Standards (AZCCRS) dramatically impacts the practice of classroom teaching and creates an urgent need for specialized professional development for teachers and principals statewide. Instructional leaders who participate in this grant project will develop and coach their teachers throughout the implementation of the AZCCRS in mathematics, provide enhanced coaching and constructive evaluation of AZCCRS mathematics instruction,

and model effective instructional leadership for other aspiring and practicing school leaders.

EDUCATIONAL PSYCHOLOGY

Addressing the Need for Explicit Evidence on the Role of Culturally Responsive Teaching and Achievement among Latino Youth

Sponsors: Spencer Foundation, National Academy of Education

\$55,000

FRANCESCA LOPEZ

Examines how teachers' beliefs and behaviors about culturally responsive pedagogy are related to Latino students' ethnic and achievement identity and academic outcomes. Analyses reveal that teachers' beliefs regarding the use of Spanish in instruction, incorporation of family's knowledge, and knowledge about the ways schools contribute to social stratification positively relate to students' outcomes.

TEACHING, LEARNING, AND SOCIOCULTURAL STUDIES

The Study of the United States Institutes for Student Leaders on U.S. History and Government

Sponsors: U.S. Department of State, Institute for Training and Development

\$376,249

MARCELA VASQUEZ (LEAD PI, BUREAU OF APPLIED RESEARCH IN ANTHROPOLOGY) AND

ALBERTO ARENAS

Provides professional development and training for a cohort of 40 college students from various Latin American countries (Paraguay, Bolivia, Peru, Guatemala, and Mexico) in the areas of history and culture of the U.S.

Investigating the Landscape of Undergraduate Science Literacy

Sponsor: National Science Foundation

\$190,369

CHRISTOPHER IMPEY (LEAD PI, UA DEPARTMENT OF ASTRONOMY) AND SANLYN BUXNER

Investigates students' science literacy, interest in science, sources of their knowledge of science, and how they use scientific evidence in making everyday decisions. Includes data collected in the past 25 years from undergraduate students enrolled in nonmajor astronomy courses at the UA.

Partners in Professional Development

Sponsors: Arizona Early Childhood Development and Health Board, United Way

\$122,700

SONYA GACHES

Provides support for undergraduate and graduate students in early childhood education to extend the leadership capacity of these

professionals throughout Pima County. Participating students receive financial support, access to events with national experts, and ongoing small-group activities tailored to support their success at the university.

Reasoning Tools for Understanding Water Systems

Sponsors: National Science Foundation, University of Montana

\$27,077

KRISTIN GUNCKEL

Prepares novice secondary science teachers for effective and responsive science teaching in linguistically diverse science classrooms. Collaborates across four universities in three states (California, Arizona, and Texas).

Southern Arizona Inducting New Teachers (SAINT)

Sponsor: U.S. Department of Education

\$590,609

CODY PATTERSON (LEAD PI, UA DEPARTMENT OF MATHEMATICS), WILLIAM B. ROTH, AND

PATRICIA STOWERS

Recruits college graduates and mid-career professionals to enter the secondary mathematics teaching profession through the Teach Arizona program. Participants commit to teach for at least three years in high-need schools in partner districts in Tucson and gain access to teacher preparation programs and three years of induction support from the UA Center for Recruitment and Retention of Mathematics Teachers. Includes a coach who visits schools and offers one-on-one mentoring.

Scholarships for Education and Economic Development (SEED) Program — MAESTRO (for Elementary Teachers)

Project SEED — AAD Tucson (for Elementary Teacher-Coaches)

Sponsors: U.S. Agency for International Development, Georgetown University

\$362,670

\$187,261

RICHARD RUIZ, VANESSA

ANTHONY-STEVENS, AND

NORMA GONZALEZ

Provides comprehensive academic and professional development for indigenous Mexican educators and draws upon the social, linguistic, and cultural resources of the UA and the Tucson community, resulting in a knowledge exchange of academic, development, service learning, and personal and professional reflection. Project SEED — AAD focuses on resource-building by working with individual teachers committed to returning to their communities to lead transformational reform in indigenous education.

Secondary Science Teaching with English Language and Literacy Acquisition (SSTELLA)

Sponsors: National Science Foundation, University of California, Santa Cruz

\$317,326

SARA TOLBERT

Prepares novice secondary science teachers for effective and responsive science teaching in linguistically diverse science classrooms. Collaborates across four universities in three states (California, Arizona, and Texas).

Southern Arizona Mathematics Initiative (SAZMI)

Sponsors: U.S. Department of Education, Arizona Board of Regents

\$626,694

ERIN TURNER

Professional development institute focuses on the Common Core State Standards Mathematical Practices for grades 2-8 teachers from Title I schools. Explores rich problem-solving tasks in various domains of the CCSSM: operations and algebraic thinking, number and operations in base ten, fractions, ratios and proportional relationships, the number system, and expressions and equations. Focuses on deepening teachers' understanding of mathematics as they solve, analyze, and discuss challenging problems. Examines strategies to engage all students with varying mathematical, linguistic, and cultural backgrounds to meet the demands of the CCSSM.

Teachers Empowered to Advance Change in Mathematics (TEACH MATH)

Sponsors: National Science Foundation, Michigan State University

\$508,721

ERIN TURNER

Addresses the key challenges of enhancing the ability of teachers to provide STEM education.

Smarter Together Working Conference: Developing a Shared Curriculum of Complex Instruction for Elementary Mathematics Methods Courses

Sponsors: National Science Foundation, University of Georgia Research Foundation

\$34,164

MARCY WOOD

Provides resources for mathematics teacher educators and future elementary teachers in supporting all elementary students to learn challenging mathematics. Uses instructional strategies — called complex instruction (CI) — that help teachers identify and dismantle barriers to student participation. Outcomes include a series of mathematics lessons available at www.Clmath.org.