

## College of Education – FY 2012 Research Abstracts

### SCHOOL OF APPLIED HEALTH AND EDUCATIONAL PSYCHOLOGY (SAHEP)

#### **Resources Management Plan, FY12**

This project will integrate the use of a statewide Geographic Information System (GIS) in the sponsor's programs by developing a centralized database to effectively serve as a library for geo-referenced infrastructure, facility, visitor, natural resources, financial, inventory, tourism, and other data. It will facilitate management of extensive digital data sets, transfer of data, and cooperation with outside agencies and the public. It will also identify and procure remote sensing data and integrate the GIS with remote sensing and better manage data internally as well as provide data to the public in a visual format. The purpose and scope of the resource management plan (RMP) is to provide background information, identify the policies and goals governing the management of individual state parks and their incorporated resources, summarize the plan's components, and provide descriptive and historical information of the project. The RMP provides the basis for management of the continuing public demand to utilize Oklahoma's state parks. The ultimate purpose of the RMP project over a number of years is to establish a management framework for the conservation, protection, enhancement, development, and use of the physical and biological resources in all of the state parks in Oklahoma.

**Sponsor:** Oklahoma Tourism and Recreation Department

**PI/PDs:** Lowell Caneday, Kaowen Grace Chang

#### **Assessment of Public Perception of Oklahoma Department of Wildlife Conservation's Wildlife Expo (2011)**

On September 24 – 25, 2011, the Oklahoma Department of Wildlife Conservation hosted the Wildlife Expo at Lazy E Arena near Guthrie. On behalf of Oklahoma State University, the principal investigators administered an exit interview similar to that utilized in prior years. The sample was a purposive, voluntary group of respondents exiting the Wildlife Expo. This interview and sampling protocol are subject to approval by the Oklahoma State University Institutional Review Board (IRB) in compliance with federal law related to protection of human subjects in research.

**Sponsor:** Oklahoma Department of Wildlife Conservation

**PI/PDs:** Lowell Caneday, Michael Bradley

#### **Public Input for Section 3134 of WRDA 2007**

This project presents a research methodology designed to provide the most efficient and effective opportunity for public input for current lake visitors, past visitors, and those who have never visited a USACE property. In addition, this project presents a research methodology for contact with Oklahoma residents, while also allowing non-residents who visit Oklahoma lakes to be included in the response. Research questions that are to be addressed in this study include: 1) What is the demand for enhanced recreation facilities and activities at USACE lakes in Oklahoma? 2) What latent needs for enhanced recreation facilities and activities at these lakes remain unfulfilled? 3) Where and by whom are such latent needs expressed – demographically, geographically, and in association with which USACE lakes? 4) What management strategies are acceptable to the public and what strategies are unacceptable to the public? and 5) What constraints to public access to USACE lakes are perceived by users and non-users of these civil works projects?

**Sponsor:** U.S. Army Corps of Engineers

**PI/PD:** Lowell Caneday

#### **Resort Market Feasibility Study**

This project is in response to the Request for Fee Proposal to conduct a market feasibility analysis for the lodge, cabins, and conference center facilities at three identified resort parks in Oklahoma: 1) Lake Murray State Park

and Lodge, 2) Roman Nose State Park and Lodge, and 3) Sequoyah State Park and Western Hills Lodge. The principal investigator will coordinate the collection and analysis of data as the foundation to the feasibility analysis. Tasks involved will be: 1) Seek and contract with an approved consultant, 2) Develop a descriptive foundation for the project, 3) Conduct a market analysis, 4) Conduct a financial analysis, and 5) Obtain certification of the team's findings.

**Sponsor:** Oklahoma Department of Tourism & Recreation

**PI/PD:** Lowell Caneday

### **National Trails Surface Study**

This project will assist Indiana University to evaluate the current status of accessible National Park Service (NPS) programs, facilities and services in order to determine the needs for training, technical assistance and research needed to improve the level of services. The goals of the project are designed to increase awareness and knowledge of how to ensure that people with disabilities have equal access to park and recreation facilities, programs and opportunities.

**Sponsor:** Indian University for the National Park Service

**PI/PDs:** Lowell Caneday, Michael Bradley

### **Oklahoma Tiered Intervention Support System (OTISS) Program**

The services associated with the implementation of this contract are designed to assist 10 schools in the beginning stages of implementing a tiered system of academic and behavioral supports, and 5 schools implementing at least one component of a tiered system of academic and behavioral supports and ready to scale up to full implementation of a blended model. Graduate students will serve as consultants to the identified schools and provide on-site training and support activities designed to assist the school sites in implementing their tiered system of academic and behavioral supports.

**Sponsor:** Oklahoma Department of Education

**PI/PD:** Gary Duhon

### **Community Education Units Program**

The Oklahoma Recreation and Park Society (ORPS) have contracted Oklahoma State University Leisure Studies Program to act as registrar and administer the Continuing Education Units (CEU) for the state Recreation, Park, and Leisure Services professionals. Professionals certified in the field of Leisure Services, and related fields, attend workshops, conferences, and other educational programs as a part of maintaining their certification. ORPS has contracted for OSU Leisure Studies to review and approve proposed CEU granting programs and sessions, monitor programs and session attendance, and grant CEUs to attendees. ORPS compensates the OSU Leisure Studies Program for providing this service. The funding received from this contract is utilized to purchase additional resources to support the teaching, research, and outreach efforts of the faculty and students in the Leisure Studies Program.

**Sponsor:** Oklahoma Recreation and Parks Society

**PI/PD:** Donna Lindenmeier

### **Implementation of Cultural Competence Education into Athletic Training Education Programs**

This project will collect qualitative data via focus groups and individual interviews. Focus groups will be comprised of 20 faculty members from CAATE accredited Athletic Training Education Programs. This sample will be taken from the current 360 entry-level (undergraduate and graduate) accredited programs. These participants will be from diverse backgrounds including race/ethnicity, geographical areas, and Carnegie classifications. This study seeks to further understand how cultural competence education is being implemented into ATEP curriculums through the most current educational competencies.

**Sponsor:** Mid-America Athletic Trainers' Association  
**PI/PD:** Jennifer Volberding

### **Play Golf America University**

The Play Golf America University at Oklahoma State University is the direct result of the contributions of alumni who have had the talent to be a part of past Professional Golf Association (PGA) Ryder Cup teams. Every member of the Ryder Cup team is allotted money to be distributed to charities and universities. The university moneys are to be spent on the Play Golf America University. Hunter Mahan, as Ryder Cup team members have designated PGA moneys to be given to OSU. The Play Golf America University is designed to teach student the fundamentals of golf as well as the opportunities to utilize golf in the business world. PGA professionals are hired to teach 32 hours per session divided into multiple class meetings. There are at least 2 sessions each fall and spring term. As of 2009, the Play Golf America University will also include a golf celebration day to encourage all students to explore the benefits of golf, and an intramural program that will qualify winning competitors to participate in the national PGA intramural tournament.

**Sponsor:** PGA Rider Cup for Hunter Mahan  
**PI/PD:** Donna Lindenmeier

### **Practicum Programs**

Programs provide students with pre-professional clinical experience.

**Sponsor:** Counseling & Recovery Services of Oklahoma, Counseling Psychology  
**PI/PD:** Al Carlozzi

**Sponsor:** Oklahoma University Health Sciences Center, Beacon Pointe, Counseling Psychology  
**PI/PD:** Julie Dorton

**Sponsors:** Stillwater Public Schools, Shawnee Public Schools, Jennings Public Schools, Psychology  
**PI/PD:** Gary Duhon

**Sponsors:** Stillwater Medical Center, Stillwater High School, LifeNet, Reese Chiropractic, Advanced Chiropractic Center, Logan Medical Center, Mercy Hospital Logan County, Dr. Donald Crawley, MD. Athletic Training  
**PI/PD:** Matthew O'Brien

**Sponsors:**, Stillwater Medical Center-Total Health, Ortho Oklahoma, Graston Technique, Northern Oklahoma College, Crescent High School, Guthrie High School: Athletic Training  
**PI/PD:** Aric Warren

**Sponsors:** Stillwater Schools & YMCA. Recreation Swim  
**PI/PD:** Patricia Hughes

**Sponsors:** Baylor Institute of Rehabilitation, Kopper Top Life Learning Center, Methodist Specialty & Transplant Hospital, University of Texas Southwestern Medical Center, Cook Children's Medical Center, Valir Rehab OKC, Integris Health, Manor Care, Saint Francis Health System, West Texas VAHSC: Therapeutic Recreation  
**PI/PD:** Tim Passmore

**Sponsors:** Stillwater Public Schools, Indian Health Care Resource Center, Tulsa City-County Health Department: Health Promotion  
**PI/PD:** Bridget Miller

**Sponsor:** Payne County Youth Services, Stillwater Domestic Violence Services, Counseling Psychology  
**PI/PD:** Carrie Winterowd

## **SCHOOL OF EDUCATION STUDIES (SES)**

### **NASA Interdisciplinary National Science Project Incorporating Research and Education Experience Cooperative Agreement**

The NASA Interdisciplinary National Science Project Incorporating Research and Education Experience, or INSPIRE, is a multi-tiered student pipeline project for students and their parents. Participating students must be in grades 9-12 or in their freshman year of college. INSPIRE is designed to provide grade-appropriate NASA-related resources and experiences to encourage and reinforce students' aspirations to pursue science, technology, engineering and mathematics, or STEM, education and careers.

**Sponsor:** National Aeronautics and Space Administration (NASA)

**PI/PD:** Steven K. Marks

### **NASA Explorer Schools Project Cooperative Agreement**

The NASA Explorer School (NES) project, launched in 2003, is designed to support educators' use of NASA's engaging mathematics, science and technology with students and families through sustained professional development, exciting student learning opportunities, integration of technology, and involvement of parents. Through the NES project, NASA establishes a three-year partnership with up to 50 school teams each year. School teams consist of teachers and education administrators of under-served students in grades 4-9 from diverse communities across the country. Educators and students in a NASA Explorer School become involved in the excitement of NASA research, discoveries and missions through participation in engaging NASA learning adventures and scientific challenges.

**Sponsor:** National Aeronautics and Space Administration (NASA)

**PI/PD:** Steven K. Marks

### **NASA Digital Learning Network (DLN) Project Cooperative Agreement**

The NASA Digital Learning Network broadcasts programs from each NASA center. Each NASA has a studio with Instructional Technology Equipment. Students of all ages experience out-of-this-world interactive learning with NASA's Digital Learning Network. Free, interactive programs allow K-12 students to learn more about our home planet and the universe beyond through video-conferencing and Web casts. Students of all ages can participate in live events featuring NASA experts and education specialists. The catalog of events and Web casts announcements contain lessons, activities, and presentations that meet instructional objectives.

**Sponsor:** National Aeronautics and Space Administration (NASA)

**PI/PD:** Steven K. Marks

### **NASA Teaching From Space (TFS)**

Under a contract with NASA, Oklahoma State University is responsible for the general administration of the Teaching From Space Program (TFS). This program provides logistical support for curriculum development, support to Flight Projects, education product development, education payloads and operations for the Space Shuttle and the International Space Station, and education conferences associated with the program.

**Sponsor:** National Aeronautics and Space Administration (NASA)

**PI/PD:** Steven K. Marks

### **NASA Kennedy Space Center Educator Resource Center**

On this project, OSU will fulfill the requirements of the Cooperative Agreement Notice and work with the NASA Kennedy Space Center to provide support by operating the NASA Kennedy Space Center Educator Resource Center. OSU support includes, but is not limited to, providing: 1) Science, Technology, Engineering, and Mathematics (STEM) Professional Development Workshops, 2) Repository of Materials of instructional products for copying and distribution to educators and students, 3) Onsite and offsite K-12 hands-on STEM workshops, 4) Educational facility familiarization opportunities guiding visitors through hands-on activities, 5) Student and educator online workshop registration, 6) STEM activities evaluated via NASA's Office of Education Performance Measurement online system, and 7) Support to Kennedy Space Center's Regional Education Resource Centers located in Georgia, Puerto Rico, and the U.S. Virgin Islands.

**Sponsor:** National Aeronautics and Space Administration (NASA)

**PI/PD:** Steven K. Marks

### **Engaging Native Americans in NASA-Centered Cyberlearning and Career Awareness Activities**

This project is a partnership between the Oklahoma Consortium for Indian Education Excellence (OCIEE, led by Seminole Public Schools) and Oklahoma State University. The long term goal of this NASA K-12 CAN project is to increase the participation of Native Americans in NASA Education and career awareness activities using problem-based cyberlearning centered around NASA's unique contributions to STEM. Our overall objectives are to: 1) Increase the use of and add value to NASA Education resources by integrating them in STEM-centered and gender-neutral problem solving experiences for high school students in districts with a high percentage of Native Americans, 2) Enhance high school teachers' understanding of the multifaceted nature and types of NASA-developed content, its alignment with national and Oklahoma PASS standards, and integration in existing STEM curricula, and 3) Increase high school teachers' knowledge and application of problem-based learning and educational technology to improve STEM instruction. The desired outcomes of the NASA K-12 CAN program and the NASA Education Framework are addressed via the following operational objectives: 1) Engage 10 OCIEE high school teachers as users and creators of NASA Education products and technology-enhanced NASA-centered STEM content, 2) Develop a web-based, open source, extensible Environment for Cyber-Learning Integrating Problem-Solving Experiences, 3) Populate the ECLIPSE system with 20 STEM-themed and gender-neutral problem-based cyberlearning activities that address the contributions of NASA's 4 Mission Directorates, 4) Implement ECLIPSE in rural Oklahoma high schools with a high percentage of Native American students and teachers, and 5) Disseminate ECLIPSE instructional practices via the ECLIPSE classroom implementation institute for 50 high-school STEM teachers from diverse school districts, training modules for NASA EPDN, and OSU's EPDC, NASA INSPIRE, NASA DLN, and presentations and publications.

**Sponsor:** Seminole Public Schools for NASA

**PI/PD:** Pasha Antonenko

### **NSTA Integrating NASA Digital Education Assets (IDEA) Project**

The Integrating NASA Digital Education Assets (IDEA) project implemented by the National Science Teachers Association (NSTA) developed a transformative, scalable model at the school district level that was designed to sustain electronic professional development (PD) for science teachers. The collaboration between NSTA and Oklahoma State University (OSU) leverages NSTA's partnership with the GE Foundation and their ongoing STEM education effort in the nation's schools. The project goals emphasize increasing teacher content knowledge and pedagogical effectiveness using NASA mission-centric content areas in Earth and Space Sciences. The method used blended electronic delivery of professional development using NASA content that has been tightly aligned with district curricula and state standards. Tools used included NASA-sponsored web seminars and online short courses utilizing NASA-sponsored online teacher modules called SciPacks/Science Objects (SOs) and existing

NASA curriculum support resources, which were findable through The NSTA Learning Center for the partnering school districts. OSU offered graduate credit for participants.

**Sponsor:** National Science Teachers Association

**PI/PD:** Steven K. Marks

## **SCHOOL OF TEACHING AND CURRICULUM LEADERSHIP (STCL)**

### **Transitioning Engineering Research to Middle Schools (TERMS)**

This project involves 24 6<sup>th</sup>-9<sup>th</sup> grade teachers and 12-15 REU students in combined research and K-12 content development. The program consists of pre-visit preparation, six (teachers) and twelve (REU students) week summer research experience, and follow up academic interactions between RET teachers, OSU faculty, REU students, and middle schools students. TERMS recruits teachers from low income, rural, and Native American communities; under-represented groups in engineering programs both locally and nationally. By developing techniques to translate research experiences into K-12 content TERMS will contribute pedagogical techniques to the national STEM knowledge base. The educational focus on emergent phenomena addresses a need to do research on how best to introduce ideas of complex system behavior at the K-12 level, critical to building a scientific workforce.

**PI/PD:** Juliana Utley

### **Creating the Strategic Model for Performance Improvement of Career and Technical Education at the High School Level**

The primary approach for the project is creating a strategic model for performance improvement of career and technical education (CTE) systems at the high school level in Korea using comparative research design.

**Sponsor:** Sungkyunkwan University, Korea

**PI/PD:** Ji Hoon Song

### **Junior Science and Humanities Symposium**

Students from Kansas, Oklahoma, and Nebraska visit the OSU campus to present projects in a regional competition in science, mathematics, and engineering. The winners of the regional competition will then compete for additional scholarships at the national conference.

**Sponsor:** Academy of Applied Science

**PI/PD:** Julie Angle

### **Career and Technology New Teacher Induction Process**

This service and research grant uses collaborators among the Oklahoma Department of Career and Technology Education (ODCTE), 22 technology centers, and Occupational Education Studies at the University of Central Oklahoma and OSU. Working as a team with local administrators, a local instructional mentor, and a higher education representative, first-year teachers identify strengths, challenges, goals, and strategies in order to move from surviving to thriving in development of the skills for effective teaching.

**Sponsors:** Oklahoma Department of Career and Technology Education and Local Technology Centers

**PI/PD:** Mary Jo Crawford Self

### **Global Climate Change: Literacy for Educators: Using On-Line Professional Development to Iterate Content and Pedagogy**

Oklahoma State University has been selected to evaluate the UNL program utilizing a mixed-methods evaluation strategy. This study employs both qualitative and quantitative data to describe the ways in which the online course design and implementation impacts teachers' content knowledge and students' learning.

**Sponsor:** University of Nebraska, Lincoln for NASA

**PI/PD:** Julie Thomas

### **G.E.T. (Geoscience Experiences for Teachers) in the Field**

The three objectives of this project are to (1) improve the Earth system science content knowledge and pedagogical competencies of 6-12 science teachers through authentic geoscience experiences with geoscientists; (2) facilitate meaningful interactions between the geosciences research community and educators that promote learning about Earth system science concepts; and (3) strengthen 9-12 geosciences education in formal settings through integration of geosciences experiences. This innovative research will enhance our limited understanding of providing geoscience professional development opportunities to non-Earth Science in-service high school teachers. By addressing this gap in a crucial knowledge base, we will be contributing valuable research results to the fields of science teacher education and geoscience education.

**Sponsor:** National Science Foundation

**PI/PDs:** Toni Ivey, Julie Thomas

College of Arts & Sciences: Jim Puckette

### **OSU Writing Project**

An affiliate of the National Writing Project, the OSU Writing Project is a collaborative school-university program dedicated to improving the quality of instruction in elementary and secondary schools through staff development training for teachers. The OSU Writing Project offers a summer institute for classroom teachers who want to improve their own writing skills and involve their students in more writing activities. Teachers must apply to the summer institute, and those accepted receive a stipend towards tuition and books. Participants study current theories of teaching writing and share their own best practices. The 2004 project was the thirteenth in a row to be funded by the National Writing Project, Berkeley, California.

**Sponsor:** National Writing Project

**PI/PDs:** Pamela U. Brown

College of Arts & Sciences: Carol Moder, Britton Gildersleeve

## **COE DEAN'S OFFICE**

### **Osher Lifelong Learning Institute and the OSU College of Education**

OLLI @ OSU is a program of educational courses for people who want to enrich their lives through new learning experiences and the sharing of ideas, opinions, and talents. Courses on a variety of topics are offered each semester to retirees and other adults in the community. Instructors are qualified volunteers who have a broad knowledge in a particular area of study and want both to share their knowledge and interact with others interested in the same area. OLLI is a membership organization sponsored by the Osher Lifelong Learning Institute and the OSU College of Education. OLLI @ OSU is supported by the OSU Emeriti Association. OLLI is governed by an Executive Committee elected by the membership. Members may attend classes and social events and give input regarding the selection of instructors and courses offered. Member fees and support from the Osher Foundation fund OLLI @ OSU operating costs.

**Sponsor:** Osher Foundation, College of Education

**PI/PDs:** C. Robert Davis

OLLI Project Director: Ruthann Sirbaugh