SCHOOL OF APPLIED HEALTH AND EDUCATIONAL PSYCHOLOGY (SAHEP)

Resources Management Plan
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
PIs: Lowell Caneday and Deb Jordan

Mapping the Beat/Project CREATES
Mapping the Beat is one component of the larger research study, Project CREATES. The purpose of Project CREATES is to plan, implement, and evaluate high-quality academic and arts instruction through co-creation teams of educators, arts/music educators, arts coaches, and community artists or musicians. Teams plan curriculum using various community resources for arts infusion to identify and support talent groups. Arts infusion and talent development will increase student perception of classroom (in terms of classroom challenge, choice, interest, and enjoyment) and achievement. MTB specifically implemented and evaluated the impact of infusing music and social studies in the curriculum planned for fifth graders.

Sponsor: Bartelmes Foundation
PI: Diane Montgomery

Preparing Future Faculty in Psychology
Programs offered will address the career interests of OSU doctoral students interested in preparing for academic careers. Participants include students from OSU’s five doctoral psychology programs housed in SAHEP in the College of Education and in the Psychology department in the College of Arts and Sciences, as well as faculty mentors and students from partner institutions (Langston University, the University of Central Oklahoma, Southwestern Oklahoma State University, Northwestern Oklahoma State University, Tulsa Community College, OSU College of Osteopathic Medicine, OU Health Sciences Psychologists).

Sponsor: American Psychological Association
PI: Sue C. Jacobs

APA Education Directorate
Sponsor: American Psychological Association
PI: Sue C. Jacobs
Oklahoma Network for the Teaching of Psychology (ONTOP)
The grant supports the creation of the Oklahoma Network for the Teaching of Psychology (ONTOP), which will have an annual conference. ONTOP will bring together individuals involved in the teaching of psychology in Oklahoma at all educational levels (high schools, 2-year colleges, 4-year colleges, and universities). In Oklahoma, there are 47 institutions offering a degree in psychology or behavioral sciences and numerous high schools where psychology courses are offered. These institutions are spread across the 181,000 square miles of the state. The first annual conference will be held on Friday Sept 21st at the Renaissance Hotel in downtown Oklahoma City.

Sponsors: Association for Psychological Science, American Psychological Association, Society for Teaching of Psychology
PI: Sue Jacobs (secondary)
PI (primary): Shelia Kennison, Arts & Sciences

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: Donna Lindenmeier

Exercise as a Recreational Therapy Intervention for Older Individuals Diagnosed with Depression
This project will evaluate the influence exercise may or may not have when delivered as a Recreational Therapy intervention to individuals admitted to a Geriatric Psychiatric Treatment Facility diagnosed with clinical depression. This project will add to the body of knowledge addressing commonly utilized interventions with specific data concerning exercise as a Recreational Therapy intervention. These findings may also provide examples of best practice exercise programs such as specific types and durations of exercise schedules for utilization with older individuals diagnosed with depressive disorders.

Sponsor: American Therapeutic Recreation Foundation
PIs: Tim Passmore, Donna Lindenmeier

Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR-UP)
A comprehensive five-year program, GEAR-UP utilizes diverse public and private two-year and four-year institutions, a state agency; non-profit community based organizations, and Tulsa Public Schools. As a main objective, the program works with approximately 1,200 middle school students and encourages them to stay in school, study, and prepare for college or vocational training.

Sponsor: US Department of Education
PI: Al Carlozzi

The Influence of Off-the-shelf Orthotics in Knee Motion of Males and Females during Functional Activities
Thus the purpose of this study is to investigate the effects of an off-the-shelf orthotic on knee motion in the frontal, sagital, and transverse planes during a stop-jump and drop-jump task in male and female subjects. The
Objective of this research is to perform experiments to determine if orthotics is efficacious in both male and female subjects in preventing abnormal mechanics at the knee that may contribute to knee injury. We plan to accomplish the objective of this research by pursuing two specific aims: 1) establish the extent to which orthotics are efficacious in reducing abnormal knee mechanics in hyperpronated individuals during a stop-jump and drop-jump task; and 2) determine concomitantly the extent to which gender affects the efficacy of orthotics in functional activity.

**Sponsor:** Mid-America Athletic Trainers’ Association (MAATA)
**PI:** Aric Warren

**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:** Donna Lindenmeier

**Practicum Programs**
Programs provide students with pre-professional clinical experience.

**Sponsor:** Associated Centers for Therapy, Inc. Counseling Psychology paid practicum
**PI:** Al Carozzi

**Sponsor:** Associated Centers for Therapy, Enid; Stillwater Domestic Violence Services Counseling Psychology paid practicum
**PI:** Barb Carozzi

**Sponsor:** FOCUS Institute, Inc., Payne County Youth Services. Counseling Psychology paid practicum
**PI:** Carrie Winterowd

**Sponsor:** Oregon State Hospital, Stillwater Public Schools. Therapeutic Recreation practicum
**PI:** Jerry Jordan

**Sponsor:** Stillwater Public Schools, Shawnee Public Schools, Yukon Public Schools, Jennings Public Schools. School Psychology paid practicums
**PI:** Gary Duhon and Terry Stinnett

**Sponsor:** Stillwater Medical Center, Stillwater High School, Advanced Chiropractic Center, Dr. Donald Crawley, MD. Athletic Training practicum
**PI:** Matthew O’Brien
**School of Educational Studies (SES)**

**Individually Prescribed Sleep Surfaces Based on Sleeping Positions Improve Back Pain and Sleep Quality**

The purpose of this study was to assess sleep quality and comfort of participants diagnosed with low back pain and stiffness following sleep on individually prescribed mattresses based on dominant sleeping positions. Subjects consisted of 27 patients (females, n=14; males, n=13; age 44.8±1.1 yrs, ±SD 14.6, weight 174 lb. ±SD 39.6, height 68.3 in. ±SD 3.7) referred by chiropractor physicians for the study. For the baseline (pre-test) data, subjects recorded back and shoulder discomfort, sleep quality and comfort by visual analog scales (VAS) for 21 days while sleeping in their own beds. Subsequently, participant’s beds were replaced by medium-firm mattresses specifically layered with foam and latex based on the participants’ prominent sleeping position and they again rated their sleep comfort and quality daily for the following 12 weeks. Analysis yielded significant differences between pre- and post means for all variables and in most cases improvement in physical discomfort and in sleep comfort and quality became more prominent with time. Additionally, the number of days per week of experiencing poor sleep and physical discomfort decreased significantly. It was concluded that it is indeed possible to reduce pain and discomfort and to increase sleep quality in those with chronic back pain by prescribing mattresses based on sleeping position.

**Sponsor:** Bob Mills Furniture, Oklahoma City, OK  
**PI:** Bert H. Jacobson

**Back Pain, Sleep Quality and Perceived Stress Following Introduction of New of Bedding Systems**

This study conducted to compare sleep quality and stress related symptoms between older beds (>5 yrs) and new bedding systems. Repeated measures analysis of variance was used to treat sleep quality and efficiency and factored responses of the stress items. Results indicated that the subjects’ personal bedding systems average 9.5 years old and were moderately priced. Significant (P<.01) improvements were found between pre- and post test means in sleep quality and efficiency. Continued improvement was noted for each of the four-week data gathering period. Stress measures yielded similar positive changes between pre- and post test means.

**Sponsor:** Sleep Council  
**PI:** Bert Jacobson  
**SAHEP:** Doug Smith
Assessment of the Effectiveness of a Sublingual, Ergogenic spray on Muscle Strength and Power

**Sponsor:** Effex, Inc.

Sublingual or transmucosal absorption occurs when a chemical comes in contact with the buccal mucosa on the underside of the tongue, where it diffuses through the membrane of the dense capillaries in the area. Nutrients, chemicals, and drugs may be delivered in this manner to provide faster absorption and response. **Purpose:** To assess the effectiveness of a sublingual, ergogenic product containing vitamins, minerals, amino acids, and a co-enzyme on muscle performance.

**PI:** Bert Jacobson

**SAHEP:** Doug Smith, Aric Warren

Assessment of the Easytone Exercise Program on Muscular Strength and Functional Capacity in Elderly Participants

The purpose of this study is to assess the effectiveness of power assisted, isokinetic resistance on muscle strength and functional capacity of elderly participants following 12 weeks of supervised training. A recently developed array of exercise equipment utilizing power-assisted mechanics have been suggested as an alternative for the elderly engaging in resistance training. The exercise machines consist of six power-assisted machines, each one designed to contribute to a large variety of exercise functions by use of multiple muscle action (agonist and antagonist) in only the concentric phase. These machines are designed to be dual action, triple action, and even quad action. The power-assisted mechanism is designed to diminish the possibility of injury to the muscle, joints and ligaments since the users never meet more resistance or endure loads more than they can handle.

**Sponsor:** ShapeMaster

**PI:** Bert Jacobson

Assessment of the Effectiveness of Non-Transdermal Lifewave Patches on Muscle Strength, Muscle Endurance, and Power

According to the manufacturers, recently developed energy patches use bioelectric stimulation produced by specific electrical frequencies in the body's magnetic field; they claim that over 99% of users experienced significant improvements (10% or higher) in strength after only a few minutes of wearing the patches. This study compares the efficacy of energy and placebo patches in the performance of bench press repetitions, standing vertical jump, and muscle endurance in college varsity athletes. The study finds no significant within or between group differences between active and placebo patches for maximum bench press repetitions, vertical jump distance, or grip strength. Based on these results, the energy patches used in this study did not significantly alter performance in the selected testing areas. Future research should focus on the efficacy of energy patches on endurance activities.

**Sponsor:** Lifewave™

**PI:** Bert Jacobson

**SAHEP:** Doug Smith, Aric Warren, Matt O’Brien

**Athletics:** John D. Stemm, Rob Glass

**OSU ADVANCE:** Partnerships for Adaptation, Implementation, and Dissemination: Gender Equity in STEM at Oklahoma State University

**Sponsor:** National Science Foundation

**Co-PIs:** Marlene Strathe and Lu Bailey

**Mathematics and Science Partnerships Program**

This project delivers professional development to middle and high school algebra teachers through a two-week Summer Professional Development Institute (PDI) and a concurrent one-week Summer Algebra Academy for
middle and high school students. It provides teachers with (1) training on content, pedagogy, and assessment related to OK PASS standards; (2) increased content knowledge to support formative assessment and diagnose student algebra learning; (3) expanded knowledge and skills for effective use of technology; (4) real classroom opportunities to work with students to implement strategies learned; and (5) peer coaching and reflection strategies related to their practice and instructional planning.

**Sponsor:** Keys High School, Oklahoma State Department of Education

**PI:** Susan Stansberry
Gayla Hudson, COE Graduate Studies & Research

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**Improving Teacher Quality: Sustainability Engineering through Math, Science, Literacy, Technology and Problem-Based Learning**

The goal of the ITQ: Sustainability Engineering project is to provide teachers with content knowledge and pedagogical skills to engage students in solving authentic, multi-disciplinary problems in a relevant context. Multi-disciplinary teams of teachers (grades 5-9) will participate in a one-week summer workshop, follow-up sessions and an online professional learning community. Teacher teams will experience and develop multi-disciplinary, problem-based learning modules that correlate with PASS and incorporate into the existing K20 ALT project (http://k20alt.k20center.org). Teacher Work Sample Methodology will assist participants in reflecting on their own practice and using data-driven decision making to make effective choices regarding students’ learning.

**Sponsor:** Oklahoma Regents for Higher Education (NCLB)

**PIs:** Susan Stansberry, Jean Dockers, Pasha Antonenko, College of Education
Karen High, College of Engineering, Architecture and Technology
Rebecca Damron, College of Arts & Sciences
Alonzo Peterson, Langston University
Gayla Hudson, COE Graduate Studies & Research

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**Oklahoma Center for Community Education**

The Center endeavors to increase accountability of community education programs in Oklahoma through assessment, communication, and training. The Center worked in partnership with a consortium advisory council made up of group members to implement the effort. The training included institutes, workshops and teleconferences, baseline assessment information, an electronic newsletter, and a webpage. Updating the Community Education Practitioners’ Handbook and developing a final report on the status of Community Education in Oklahoma will complete the project.

**Sponsor:** Oklahoma State Department of Education

**PI:** Deke Johnson, Director

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**NASA Teaching From Space Cooperative Agreement**

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:** Steven K. Marks

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**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:** 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:** 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:** Steven K. Marks

**OSU Aerospace Education High School Student Summer Academy**

The OSU Aerospace Education High School Student Summer Academy makes it possible for 30 students who are beginning grades 11 and 12 to actively study aerospace education concepts. The academy strives to nurture students’ interest in technology, biology, chemistry, physics, earth science and mathematics, and to demonstrate how these disciplines can be integrates into aerospace education studies, and support the Oklahoma Priority Academic Student Skills (PASS). This two-week experience provides on-campus classroom activities and regional field trips, including trips to Oklahoma aviation industries and the Johnson Space Center in Houston, Texas, to study aerospace career options, technology applications to the aerospace industry, and the impact of aviation and space exploration on society.

**Sponsor:** Oklahoma State Regents for High Education (OSRHE)
**PI:** Steven K. Marks

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

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

This project involves 24 6th-9th 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.
Co-PI: Juliana Utley

Building Bridges between University Faculty and Novice Teachers
It is important to recognize the importance of a support network for teachers. Teachers must have somewhere
to turn when they have questions or need support. The Building Bridges Project will support novice teachers (1-5
years experience) in the Tulsa area through establishment of a Professional Learning Community and assess the
specific needs of novice teachers in the Tulsa area in order to better serve them in the future. An innovative
feature of this project is the initiative on part of OSU faculty to build a model to continue support of novice
teachers through the SharePoint webspace.
Sponsor: Oklahoma State Regents for Higher Education (Minority Teacher Recruitment Center)
PI: Juliana Utley

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: Caroline Beller

Collaborative Research: Engineering Students for the 21st Century
This multi-year department-level reform program will replace the traditional focus on acquisition of knowledge
with an emphasis on student cognitive development, where knowledge acquisition becomes a means to an end.
Selected courses across the engineering curriculum are being reformed to fit this developmental model by
modifying both the content of the courses and the methods of teaching.
Sponsor: National Science Foundation (NSF)
PIs: Richard Bryant/Juliana Utley
Electrical and Computer Engineering: R. Alan Cheville, Charles F. Bunting, and Keith A. Teague
Digital Library Services: Elizabeth A. Reiten
Physics: Timothy M. Wilson

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
PIs: Christine Ormsbee
English: Carol Moder, Britton Gildersleeve
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: Mary Jo Crawford Self

International Fair: A Multicultural Exploration for Kids
The International Fair: An Multicultural Exploration for Kids will support the training of OSU pre-service teachers in order to increase their effectiveness in working with diverse racial and ethnic populations, and will support classroom teachers in their efforts to provide diverse cultural experiences for their students so that “students . . . learn about cultures and environments—their own and those of others with whom they share the earth.” The project will support teachers in their professional development as culturally responsive teachers, thus enhancing the image of the teaching profession. Pre-service teachers participating in the International Fair will be more likely to remain in the teaching profession.

Sponsor: Oklahoma State Regents for Higher Education
PI: Nadine Olson
COE Outreach: Candace Thrasher

International Reading Association
Sponsor: International Reading Association
PI: Barbara Walker

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 and the College of Education
PI: Pam Fry
OLLI Project Director: Ruthann Sirbaugh

EDUCATION RESEARCH SUPPORT SERVICES

OEC - Mentoring - Year 3 of 3
The Mentoring Professional Development Institute (PDI) has the potential to reduce the attrition rate of new teachers during their first three years of service, thereby providing a stable supply of teachers for school districts and alleviating the replacement costs of new teachers. The one objective of the PDI is to retain teachers and
improve their overall quality through comprehensive induction. Also, the PDI will create high-functioning learning communities within the partner schools and to develop teachers and principals into high-quality professionals who improve student learning. In addition the PDI will deliver and support professional development that will become systematically embedded in the culture of the school and professional development that supports and sustains all members of the residency committee for a minimum of two years.

**Sponsor:** Oklahoma Commission for Teacher Preparation  
**PI:** Gayla Hudson, COE Graduate Studies & Research

**Growing NBPTS Leadership North Tulsa/Gilcrease Middle School (MTRC)**  
The project objectives are (1) to provide support and development of mentor teachers in North Tulsa Schools, (2) to provide quality mentor training that enables the mentor teacher to address the needs of novice teachers in high needs schools (3) to create an opportunity for NBCTs to mentor novice teachers while preparing them for NBC candidacy at an accelerated rate (4) to provide a network of support for novice teachers (1 – 3 years) in the North Tulsa School district, (5) to increase the retention of teachers in the North Tulsa School District.  
**Sponsor:** Oklahoma State Regents for Higher Education (Minority Teacher Recruitment Center)  
**PI:** Gayla Hudson, COE Graduate Studies & Research