

**THE CHANGING
FACE
OF RESEARCH**



**THIRD ANNUAL
MIDWESTERN CONFERENCE
ON RESEARCH AT
PREDOMINANTLY
UNDERGRADUATE INSTITUTIONS**

●
**PARK UNIVERSITY
MAY 1, 2008**



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CENTER FOR EXCELLENCE IN TEACHING AND LEARNING

Schedule of the Day

8:30 a.m. – 9:30 a.m.: Registration, Continental Breakfast, and Welcome,
Dr. Carol Sanders, Assistant Professor of Biology, Park University
College for Distance Learning

9:30 a.m. – 11:00 a.m.: Morning Presentation: Session 1
College for Distance Learning

11:00 a.m. – 12:30 p.m.: Lunch and Keynote Speaker
Scott Hageman, Associate Professor of Geology, Park University
“Quality Undergraduate Research, ‘MacGyver’ Style”
College for Distance Learning, Room MA

12:30 p.m. – 2:00 p.m.: Afternoon Presentation: Session 2
College for Distance Learning

2:00 p.m. – 2:15 p.m.: Break
Refreshments will be served in the conference room off of the foyer

2:15 p.m. – 3:45 p.m.: Afternoon Presentation: Session 3
College for Distance Learning

3:45 p.m. – 5:15 p.m.: Afternoon Presentation: Session 4 and Closing
College for Distance Learning

About our Keynote:



Scott A. Hageman is an Associate Professor of Geology and Geography at Park University. He completed his B.S. at the University of Kansas and then continued his graduate studies at the University of Kansas and University of Tennessee. He accepted a full time teaching position in 1998 with Park University as a natural science professor that has now evolved into a Geography Degree Program.

Scott's research interests are very broad and currently are associated with a variety of research projects, including:

- Geographical Information Systems (GIS) projects associated to sustainability and deep mapping
- Paleontology
 - Micropaleontology (fusulinids)
 - Vertebrate Paleontology (George H. Sternberg Collection)
 - Paleobotany
- The Park University Underground

Morning Presentation: Session 1, 9:30 a.m. – 11:00 a.m.

Session 1A: Student Faculty Collaboration

Room: MB

Carol Getty, Emily Donnelly, Ashleigh Atchison, Barbara J. Kidd, “Mentoring the Undergraduate Thesis: Student and Faculty Perspectives”

David P. Fox, Scott A. Hageman, Brian L. Hoffman, “Deep Map Project of Northwest Missouri: An Interdisciplinary Faculty-Student GIS Collaborative”

Amber Dailey, Emily Donnelly, Jean Mandernach, “Strategies to Enhance Scholarship and Mentoring through Collaborative Faculty-Student Research”

Session 1B: Teaching as Research

Room: Classroom

Steve Atkinson, “Using Teaching Experience as Scholarship: The Classroom as Research in English Studies”

Kay Miller Boehr, Donna Bachman, Masoom Khawaja, Jon Young, “Using Creative Scholarship to Improve Teaching: A Panel Discussion”

Cyndi Danner-Kuhn, Dan Kulmala, Andy Stanton, “Research for the YouTube Generation”

Afternoon Presentation: Session 2, 12:30 p.m. – 2:00 p.m.

Session 2A: Action Research in Schools and Communities

Room: MB

Benjamin D. Caldwell, "The Summer Research Institute: An Alternate Research Model Involving Faculty, Undergraduates, and High School Students"

Walter E. Kisthardt, "Community-Based Action Research: A Promising Model for Research at Predominately Undergraduate Institutions"

Germaine L. Taggart, "Undergraduate Action Research: A Key Component of an Elementary Program"

Session 2B: Student Faculty Collaboration

Room: Classroom

Adrienne Barr, Lolly Ockerstrom, Virginia Brackett, "Who Talks, Who Listens? A Conversation about Learning, Thinking, and Writing by Three Partners in a Research Project"

William Miller, "Undergraduate Research Equals Student Discovery"

Sherry Fischer, Brynne Musser, Carol Sanders, Donald Williams, "Student Research: Collaboration between Students and Faculty mentors"

Afternoon Presentation: Session, 2:15 p.m. – 3:45 p.m.

Session 3A, Theoretical and Practical Aspects of Research at PUI's
Room: MB

Betty A. Block, "Asserting Our Identity as Scholars: A Response to Postmodern Challenges at PUI"

Virginia Brackett, Lolly Ockerstrom, Jane Wood, "Practical Collegiality: The Team Approach to Research and Presentation"

Brian Cowley, Kevin Payne, Andrew Johnson, "Leveraging Single-Subject and No-Subject Research Methods"

Session 3B, Service and Leadership
Room: Classroom

Lora Cohn, Diana Boyd McElroy, "Learning Reconsidered 2: Implementing a Campus-Wide Focus on the Student Experience"

Richard Robl, "Integrating Service and Leadership into Academic Programs"

Justin Kraft, "Capturing the Scholarship of Engagement in Predominantly Undergraduate Institution Classrooms"

Afternoon Presentation: Session, 3:45 p.m. – 5:15 p.m.

Session 4A, Innovative Classroom Models of Research

Room: MA

Greg Plumb, “Modeling Research for Undergraduate Students”

Jeffrey L. Poet, Todd T. Eckdahl, “Synthetic Biology Research”

Thimios Zaharopoulos, “Undergraduate Students as Data Gatherers: Learning Research Methods by Doing Research”

Session 4B, Evaluating Scholarly Teaching Across Contexts

Room: Classroom

Sherry Fontaine, “Models for Evaluating the Scholarship of Engagement for Promotion and Tenure Decisions”

Jake Glover, Bo Yang, “Tastes Great, Less Filling: Measuring (and searching for meaning and application in) Student Perceptions of Satisfaction across Online and On Campus Methods of Teaching”

Kevin Rabas, “Securing a Research and Creativity Grant”

Abstracts (listed alphabetically by the last name of the first presenter)

Steve Atkinson, Park University, “Using Teaching Experience as Scholarship: The Classroom as Research in English Studies”

Classroom experience is an often undervalued resource for developing and presenting peer-reviewed scholarship at academic conferences or in print. Those of us whose institutions focus primarily on teaching do not need to segregate our scholarly and pedagogical efforts; the two can complement each other and help merge the activities that occupy most of our time and effort. The present paper will present overviews of three papers read at national and regional conferences that draw primarily on classroom activity, that cite students as sources (including recordings of classroom discussions), and that deal with difficult texts (authors such as William Faulkner, Toni Morrison, and Gabriel Garcia Marquez) and problematic theoretical issues such as post-structuralism. The benefits, of course, work in both directions: the classroom becomes a resource for scholarship, and the scholarly work strengthens future work in the classroom

Donna Bachman, Kay Miller Boehr, Masoom Khawaja, Jon Young, Park University, “Using Creative Scholarship to Improve Teaching: A Panel Discussion”

The panelists, faculty in the department of Art, Design and Theatre at Park University, have been discussing issues of creative scholarship in department meetings for over a year. Creative Scholarship is what we do: painters paint, designers design and actors act. All of us are involved in personal and professional creative work, yet we are dedicated to teaching and to developing and improving our programs. We have determined that, to be valid for us, creative scholarship should do the following:

- Improve our teaching skills.
- Improve the quality of the art, design and theatre programs.
- Promote our own growth as designers and artists.
- Add to the body of knowledge in our fields and/or advance our professions.

There are several ways creative work may meet the traditional goals of scholarship and support our primary focus as teachers:

- Creative work may involve students in the process.
- Creative work may be used as a case study and as a tool to illustrate concepts for a class.
- Creative work may be a catalyst for developing project assignments for a class.
- Creative work in one’s professional field may provide students with a real time view of professional practice and may demonstrate what it means to be an artist or designer.

The discussion will begin with panelists defining “creative scholarship” for each discipline, followed by a presentation of one or more examples of their creative work.

Panelists will describe how the work has met the requirements listed above, especially in the improvement of teaching skills and in the improvement of the art, design and theatre programs.

Adrienne Barr, Virginia Brackett, Lolly Ockerstrom, Park University, “Who Talks, Who Listens? A Conversation about Learning, Thinking, and Writing by Three Partners in a Research Project”

What is research and who does it? What does it mean to collaborate on research? Who teaches, who learns? What constitutes success in the formation of ideas? These questions will be addressed in a conversation with three panelists involved in the Park University Degree with Honors Program: an undergraduate student, her mentor, and the director of the program. Each panelist will speak from her unique perspective in the three-year collaborative process of defining, shaping, and creating an honors project in socio-linguistics.

The word, “research” involves a systematic investigation of sources and materials in order to “re-see” old conclusions and come to new conclusions or fresh perspectives. For undergraduate Adrienne Barr, the journey from initial “inkling,” or hypothesis, through the jungle of existing research, and the emergence of a well-defined project came only after a series of false starts and self-doubt. Listening more than speaking, Adrienne’s mentor, Lolly Ockerstrom posed more questions than answers as she tried to understand and guide the student toward her goals. Hearing the story of the project as it reached several plateaus in its development, Virginia Brackett, director of the program, offered encouragement and challenges to keep the student moving forward.

Recognizing when the project was well-defined enough to proceed, all three partners worked to maintain openings for discovery and insight as the project developed. At times, this meant for the student periods of uneasiness: what will I find? What if I can’t prove anything? The mentor’s role throughout the process was to insist that surprise is always part of research.

Betty A. Block, Missouri Western State University, “Asserting Our Identity as Scholars: A Response to Postmodern Challenges at PUI”

This presentation is a call to predominately undergraduate institutions (PUI) to respond to postmodern attitudes that are attempting to redefine professors as scholars and researchers to employees and service providers. The presenter will address cultural and academic challenges to American universities as influenced by the conditions of postmodernism and how the changes affect the identity of professors teaching at PUI.

Postmodernism is a term used to define a cultural shift or emergence out of modern times into something different. It is a condition of transference from one era to another with elements and characteristics of the modern and the postmodern present at the same time. Postmodern conditions influence the missions of PUI, the roles of professors, and how research, service and teaching are viewed.

The presenter will discuss the expectations of PUI and professors with regard to postmodern conditions, which include the loss of the metanarrative and resulting fragmentation, the deconstruction of the hegemony of science as a method of knowing, the immersion of media and technology into American culture and society, and the interdependence of consumerism and culture. The discussion will continue with the postmodern view of the PUI as a commercial enterprise where students of varying intellectual abilities and ages expect to be admitted and treated as customers rather than students. Student and parent demands and expectations have produced unprecedented special services offered by PUI. In doing so, the traditional ideals of the *professor as scholar* and *university as bastion of learning* have been challenged.

Virginia Brackett, Lolly Ockerstrom, Jane Wood, Park University, “Practical Collegiality: The Team Approach to Research and Presentation-A Dialogue”

How does one working at a predominantly undergraduate institution find the time and energy to identify a conference, apply for funding, make travel plans, develop an idea, conduct research, write a paper, and arrive confident and optimistic for a presentation at said conference? Collaboration with peers may provide the answer to that question.

Lolly Ockerstrom, Jane Wood and Virginia Brackett were brand new colleagues in fall 2006 when they recognized they shared an interest in 20th-century modernist writer, Virginia Woolf. One colleague invited her two peers to join in design of a panel for the 17th Annual International Virginia Woolf Conference. Brainstorming sessions followed that resulted in an eventually refined theme. That common theme allowed for accommodation of three quite different, yet complimentary, research interests. After two months of thought, discussion and writing, three compiled abstracts were submitted as a panel proposal. The result: a successful presentation and complete and joyful immersion into a favorite topic at an international conference far from the demands of everyday academia.

What seems a daunting to impossible task on one's own may transform into a viable and invigorating experience when shared. This PUI dialogue will trace the development of a successful panel conference presentation from idea through delivery as a result of collaboration among three peers. It will highlight not only the professional but also the personal logistics of working with one's colleagues to engage in scholarship required by predominantly undergraduate institutions.

Benjamin D. Caldwell, Missouri Western State University, "The Summer Research Institute: An alternate research model involving faculty, undergraduates and high school students"

Undergraduate research can take many forms, from one-on-one collaborative research between a student and a faculty member to inclusion of an undergraduate in a large research laboratory with graduate students and postdoctoral researchers. No single research model will fit all undergraduate institutions. At Missouri Western

State University, undergraduate research has historically come in two major forms: 1) independent study or 2) faculty-directed research. With the high demands of course work and the typical teaching loads of a predominantly undergraduate institution (PUI), a majority of student-centered research efforts at our institution occur during the summer months. Since 2002, Western has added a twist to the typical student-faculty research model by coupling undergraduate research with the inclusion of regional high school students in a program known as the Summer Research Institute. While such opportunities for high school students are not unique to Western, we feel that the Summer Research Institute (SRI) has helped to influence and promote an emerging culture of research. In addition to generating interest in research in high school students, SRI presents an opportunity to recruit highly talented students. This presentation will describe the history and development of SRI and its accomplishments on and off campus. It is hoped that SRI may prove to be a model program for other institutions looking for a different approach to research.

Lora Cohn, Diana Boyd McElroy, Park University, “Learning Reconsidered 2: Implementing a Campus-Wide Focus on the Student Experience”

We plan to facilitate a discussion on the basics of “*Learning Reconsidered 2: Implementing a Campus-Wide Focus on the Student Experience*” which focuses on the integration of academic learning and student development. How can we engage faculty and staff in cooperative research and programs for the betterment of students? What are some effective strategies that student services staff and faculty can implement to engage students in meaningful learning opportunities outside the classroom? How can we best focus research on these programs, so we can determine the impact on students of these engagement programs? What can we garner from “Learning Reconsidered” to better develop and assess programs that are intentionally focused on student learning outcomes?

Our intent is to:

- Facilitate an open dialogue about learning itself and what we value as important for our students to learn: core curriculum, leadership, communication, and more.
- Discuss specific strategies that staff and faculty can utilize on their own campuses to collaborate effectively.
- Suggest effective ways to collaborate among campuses.
- Develop a better understanding of the information in Learning Reconsidered and how those ideals can be implemented in the programming, services, and assessments on our campuses.

Brian Cowley, Andrew Johnson, Kevin Payne, Park University, “Leveraging Single-subject and No-subject Research Methods”

One obstacle in the pursuit of research endeavors at predominately undergraduate institutions (PUI) is a lack of large participant pools. PUI's with student populations from 700 to 2,500 may face challenges of obtaining sufficient numbers of study participants for descriptive or co-relational research methods. To

address this challenge, we would like to present four flexible research methods that PUI's can leverage to produce quality scholarship. Additionally, since these research methods typically do not involve extensive Institutional Review Board (IRB) approval processes, delays are minimal. The IRB process for certain types of research, e.g., research with children or other protected groups, can be extensive and may pose considerable timetable challenges.

More specifically, we would like to present the research methods of: single-subject design (when applied to self-change questions); content analysis; meta-analysis; and secondary analysis.

We propose to organize our symposium with an overview of each of the research methods (single-subject research, content analysis, meta-analysis, and secondary analysis) with the following components: (a) brief conceptual overview of the research method; (b) case study examples in psychology and sociology to illustrate the research method; (c) statistical analysis; (d) suggestions and applications to interdisciplinary venues. At the conclusion of our presentations we would address a general discussion of locating sources and support for research projects.

**Amber Dailey, Emily Donnelly, B. Jean Mandernach, Park University,
“Strategies to Enhance Scholarship and Mentoring through Collaborative
Faculty-Student Research”**

Faculty at primarily undergraduate institutions often struggle to balance scholarship expectations with heavy teaching responsibilities. Compounding the challenge is the need (and desire) to provide students with meaningful educational opportunities that extend beyond the standard course curriculum. One means of addressing this dilemma is to integrate scholarship and mentoring to simultaneously produce meaningful research in collaboration with student investigators.

For the student investigator, the benefits of collaborative research with faculty are clear: students have the opportunity to learn the nuances of scholarly work, honing their inquiry, research, and writing skills at an advanced level. In addition, immersion in the intellectual work of their field provides students with the unique opportunity to contributing to the knowledge base of their discipline as an undergraduate. Equally important, faculty-student collaborations provide benefits to the faculty member as well. Faculty can “tackle more complex research questions and use limited resources in a more efficient manner” (Roig, 2007). Furthermore, effective faculty-student collaboration allows faculty the opportunity to simultaneously participate in both scholarship and teaching, thus maximizing the time investment toward multiple goals.

As with any collaborative effort, faculty-student research collaborations have the potential to be time intensive, dysfunctional and/or unproductive. Break downs in the collaborative relationship can also raise both practical and ethical questions concerning data ownership, project outcomes and authorship rights. This presentation will discuss strategies that faculty can utilize to promote effective, efficient research collaboration with students while clearly delineating the roles of co-investigator from advisor.

Cyndi Danner-Kuhn, Dan Kulmala, Andy Stanton, Fort Hays State University, “Research for the YouTube Generation”

What happens when faculty hybridize the curriculum, blending disciplinary approaches for the communication of ideas? This session blends the disciplines of English and Communication/Multi-Media into a project that engages students in the act of communication that enhances the learning of writing and visual communication. One of the primary goals of this project intends to engage the digital generation in the acts of research that the non-digital generation had come to know and learn as typical information gathering skills. Due to the Internet and the vast availability of information, students of the digital generation no longer need to perform the tedious task of investigating reference texts to find research sources. But even though this readily available information makes research easy, students no longer need to utilize key academic skills, like critical thinking, that actually might have benefited the writing and creative process. So students enrolled in these two courses during the Spring 2008 semester will be asked to respond to the following prompt: Dare to Dream. Then their task will involve creating a multi-media essay on that topic using video, hyperlinks, and/or web sites to effectively communicate their message. Our session will demonstrate how such projects will benefit faculty who teach at Predominately Undergraduate Institutions and how faculty at such institutions can bridge the gap between the digital natives (YouTube Generation) and the digital immigrants (pre-Internet Generation).

Emily Donnelly-Sallee, Carol Getty, Park University, “Mentoring the Undergraduate Thesis: Student and Faculty Perspectives”

Some of the most significant undergraduate research that occurs at predominately undergraduate institutions is in conjunction with honors programs. Honors programs can foster a scholarly culture among undergraduates and, because of the close collaboration between faculty advisors and honors students, can provide faculty with meaningful research experiences as they re-visit skills and knowledge from their own undergraduate and graduate days. A staple of honors programs, the undergraduate thesis is a genre with much potential to enhance the scholarly community at PUIs. On this panel, Park University faculty advisors and honors students will report on their experiences with the undergraduate research thesis, presenting their perspectives, processes, and best practices for undergraduate research.

Todd T. Eckdahl, Jeffrey L. Poet, Missouri Western State University, “Synthetic Biology Research”

For two years, faculty and students from Missouri Western State University have worked with faculty and students from Davidson College in North Carolina to conduct synthetic biology research. Work from the collaborative effort has been showcased at the international Genetically Engineered Machines (iGEM) Jamboree, an initiative by M.I.T. to promote the budding field of synthetic biology in which engineering principles are applied to molecular biology. Synthetic biology is a natural fit for multidisciplinary investigation. The research teams have consisted of

math and biology faculty and undergraduates from each PUI. The interdisciplinary and inter-institutional nature of this work illustrates how PUIs can pool human and physical resources to perform effective research. This collaboration recently received an NSF grant to fund its efforts for the next three years.

Sherry Fontaine, Park University, “Models for Evaluating the Scholarship of Engagement for Promotion and Tenure Decisions”

In his book, *Scholarship Reconsidered: Priorities of the Professoriate*, Boyer (1990) broadened the definition of scholarly research to include the scholarship of application, or what is also referred to as the scholarship of engagement. The recommendations in the subsequent Boyer Commission Report have been positively received by academe. Many colleges and universities have adopted the Boyer Model in the faculty review, promotion, and tenure process. Yet adherence to the Boyer Model in evaluating faculty research is not always the case. This is particularly true for non-traditional research that often falls into the category of the scholarship of engagement.

This paper will review models used by academic institution to recognize and support the scholarship of engagement in tenure and promotion decisions. The review will include the guidelines of the National Review Board for the Scholarship of Engagement for assessing the scholarship of engagement for faculty as well as evaluation methods used by academic institutions which have received the Carnegie Foundation for the Advancement of Teaching Community Engagement classification.

Jake Glover, Bo Yang, Fort Hays State University, “Tastes Great, Less Filling: Measuring (and searching for meaning and application in) Student Perceptions of Satisfaction across Online and On Campus Methods of Teaching”

The research project explores five undergraduate sections (two on campus and three online) of a Foundations of Education course. Two sections of the course were taught on campus by a two-person faculty team. These professors also each individually taught an online section of the course and an additional instructor taught the final online section of the course. The research measures levels of student satisfaction and engagement across the five class sections and compares the results with methods of instruction. Additionally the project includes inputs from the instructor’s perceptions of the sections, Blackboard data (usage data for various sections of the Blackboard site), perceptions of satisfaction with specific learning technologies (Elluminate, FlashMeeting, Wiki Spaces), grading data and perceptions of satisfaction with group projects in online and on campus settings.

Benefits of the presentation (and applicability to the 3rd Annual Midwest Conference on Research at PUIs) will be to give statistical measures of success and satisfaction (both faculty and student) as it relates to the teaching methods and mode of delivery (online/on campus). Participants in the session will take away analysis and instructional design information for immediate use and impact at their own institutions. This presentation explicitly meets the conference goals for Faculty Research as well as the Scholarship of Teaching component within the goal for Scholarship of Engagement.

Scott A. Hageman, Brian L. Hoffman, David P. Fox, Park University, “Deep Map Project of Northwest Missouri: An Interdisciplinary Faculty-Student GIS Collaborative”

Northwest Missouri is an understudied region of the United States. Studies that have been done are typically fragmentary and fail to provide integrated analysis and a comprehensive sense of place. Deep mapping refers to the emerging practice of integrating data from the widest range of sources possible in an endeavor to remedy such shortcomings. Due to the limitation of funds and research assistants at a primarily undergraduate institution, deep mapping will be initially achieved by combining data obtained through individual and collaborative faculty research with that from student projects completed in courses, such as Geographic Information Systems (GIS) and Advanced GIS. The regional focus provides direction for student course projects while at the same time allowing them to conduct their research on virtually any topic of interest. Students will be asked to incorporate field measurements gathered with global positioning system (GPS) units into this continually evolving project. The datasets will be collected into a GIS to provide the most extensive database possible for conducting interdisciplinary research projects and analysis of the region. The geography, geology, and biology programs at Park University are currently conducting research on the history, topography, biota, and physical environment of the region, which serves as the initial phase of the deep map project. A second phase will consist of an emphasis on social and cultural datasets and will also encourage additional programs, such as history and criminal justice, to join in the collaboration.

Walter E. Kisthardt, Park University, “Community-Based Action Research: A Promising Model for Research at Predominately Undergraduate Institutions”

This paper describes the application of Community-Based Action Research to gain a deeper understanding of the current treatment approach with persons with substance abuse and chemical addiction. The author's research was carried out over a period of one year at a residential treatment program in Southeast Kansas. The presentation reviews the theoretical and conceptual framework of Community-Based Action Research. The collaborative, participatory nature of this methodology is described. This approach follows in the rich tradition of Ethnographic methods and it provides a practical and elegant alternative for faculty at PUIs. Findings related to current treatment practices are imparted. Insights gleaned from focus group and individual discussions with service participants shed light on this social problem from the perspective of the person experiencing the condition rather than the professional “expert”. Implications for policy, programs, and future research are discussed. Examples of how this research endeavor was utilized to engage students in a Social Work Practice class are also presented. The current scene is characterized by increasing numbers of people being encouraged or mandated to receive substance abuse treatment by the courts, employers and families. Funding for the provision of comprehensive treatment is inadequate to meet the demand. Students who enter this field need to be prepared to work with participants in a more efficient and effective manner.

Justin Kraft, Missouri Western State University, “Capturing the Scholarship of Engagement in Predominantly Undergraduate Institution Classrooms”

Predominantly undergraduate institutions (PUIs) often have difficulty replicating the research model of larger comprehensive universities. In addition to traditional research opportunities, it becomes essential that PUIs impart the same critical thinking and problem solving skills learned through the research process. Five critical thinking strategies further this: 1) academic engagement; 2) group problem solving; 3) undergraduate research; 4) civic engagement through service learning and 5) self-assessment.

Academic engagement means taking time in class to reflect, interact, and collaborate with peers. Teaching in this manner requires transference of some power and control to students in order to teach them to be responsible for their own learning (Knapper, 2007). Academically engaging students in critical thinking can be done in many different ways among which include critically interpreting artifacts related to course content, debating issues in various ways, challenging professional theories and personal beliefs, and creating projects. Group problem solving provides opportunities for students to participate in face-to-face reflexive dialogues which compel them to examine and honor individual perspectives of others during discussions. Research serves as a formal means to engage the students in critical thought by providing the opportunity to present an original problem, propose a way of studying the problem, and critically analyze the outcomes. Civic engagement and service learning allows students to integrate their academic agenda and community issues while practicing real life problem solving. Finally, self-assessment embeds critical thinking concepts into the curriculum as a form of supplemental content.

William Miller, Baker University, “Undergraduate Research Equals Student Discovery”

With over a million dollars in National Science Foundation grants we look at student involvement and results. Our projects involve the Taxonomy, Distribution, and Genetics of microscopic animals are national and international in scope and incorporates student participation in the planning, field work, lab processing, and presentation of the results. We review the events of the projects and recount the experiences of several of these students in central China, on Santa Cruz Island, in the remote wilds of Wisconsin, and Washington DC. The excitement of travel, the collection of samples, and the meeting of new people is contrasted to the tedium in the laboratory processing the specimens. We report the growth and maturing experienced by some students. We recount our student's process of discovery, noting the moment when a student becomes a scientist and questions the unknown. We have seen the EUREKA moment several times, the moment when discovery answers the question. Our students have discovered animals unknown to the state, the country, and the continent. We have discovered several species of animals totally new to science. Our undergraduate students are learning by participating in the research process and then telling the world what they discovered. They are researching and publishing.

Sherry Fischer, Stream Team Biologist, Kansas City Region Missouri Department of Natural Resources, Brynne Musser, Carol Sanders, Donald Williams, Park University, “Student Research: Collaboration between Students and Faculty Mentors”

Non-major biology students, for the most part, fear science and simply enroll in a course just to meet a graduation requirement. As professors, we want to challenge and excite our students about the world of science and how that world is a vital, integral part of their world. Toward that end, we in the Biology Department at Park University have employed the use of the Missouri Department of Natural Resources Stream Team activities to demonstrate real-world data collection and analysis of that data. Our presentation will show how Stream Team activities are used for laboratory investigations as an attempt to engage students in real-world science.

Greg Plumb, Park University, “Modeling Research for Undergraduate Students”

Two problems are becoming more prominent at primarily undergraduate institutions: 1) demands for faculty publishing scholarship and 2) students ill-prepared to conduct research. At smaller institutions that operate under the traditional liberal arts curriculum and organizational structure, emphasis for faculty is most often on teaching. Yet, a growing number of institutions are increasing the demands for faculty to also publish their scholarship. College students also often write papers that are expanded book reviews/reports or a report on a combination of books and/or websites. It is often difficult for them to engage in original research or write papers that are truly analytical in nature.

One method to deal with both issues is to model research for students in each class the instructor teaches. The instructor can share his/her progress in personal research in the classroom, serving as a model for students to see how undergraduate research should be conducted. This paper will present a plan that faculty members can implement in most classes in undergraduate study. It will also provide variants for the different course levels, so that students can grow their research and writing skills throughout their undergraduate studies. Experience in following this plan in an introductory general education course and in an upper level capstone course will be shared.

Kevin Rabas, Emporia State University, “Securing a Research and Creativity Grant”

My presentation will focus on the process I used to investigate and earn a research and creativity grant from Emporia State University, which allowed me to focus on finishing, publishing, and promoting my first book, **Bird's Horn & Other Poems.** I will describe the process I used to learn more about the grant in advance, and I will detail the strategies and techniques I used to write my grant proposal. The grant allowed me half-time teaching release for one year, which is substantial release time during a standard 4/4 teaching load at a Predominantly Undergraduate Institution.

Richard Robl, Sterling College, “Integrating Service and Leadership into Academic Programs”

This action research project was in response to the challenge to document the advancement of the mission of Sterling College to develop servant leaders. The research question was how to integrate service and leadership into all academic programs. This integration occurred through academic courses and through service projects completed by the majors in each department. Leadership concepts were selected and standards developed for each concept. Teaching faculty members were asked to identify where and how these leadership concepts were being developed in the courses they taught. The project director met with each faculty member to determine how the leadership development of students would be assessed. Faculty members submitted their assessment data at the end of the fall and spring semesters. The data was analyzed to determine the level of leadership knowledge and skills of the students. Faculty members received the collected data from all courses and were asked to respond to how they would use the information to increase the learning of their students.

The second part of the project required that each academic department have a service project for its majors. The departments were provided a planning outline that was to be completed by the students. The outline included steps for planning a service project and for identifying the leadership skills that the students would use and improve. At the end of the service project the students reflected on their implementation of the plan and how they improved their leadership skills. Reports from the departments were analyzed to identify the skills used in the projects. Summary data was given to the departments to be used in planning future service projects.

Germaine L. Taggart, Fort Hays State University, “Undergraduate Action Research: A Key Component of an Elementary Program”

Action research projects that are meaningful for candidates and that may serve the purpose of program, coursework, or project validation for accreditation purposes are a valuable learning experience for candidates in our undergraduate elementary education program. Action research is a module within the course Curriculum and Assessment. Over the past several years, students have researched areas within our program; surveyed parents, administrators, teachers on many aspects of being an educator; and have analyzed data as partial fulfillment of this course.

Join a panel of undergraduate candidates as they review their projects, provide insight on what they have learned, and provide ideas on how undergraduate research can be accomplished within a one semester course.

Thimios Zaharopoulos, Park University, “Undergraduate Students as Data Gatherers: Learning Research Methods by Doing Research”

A research methods course is shown to be an excellent venue for faculty to teach methods by letting students do hands-on social science research, while providing the instructor at a primarily undergraduate institution, with qualified students who can gather data and help the instructor have successful research publications.

On four different occasions, students in this class have become data gatherers for a project of their professor. This paper raises some ethical issues about this practice, but it also shows that the best way for students to learn research methods is to actually be part of a real research project.

In the first instance students gathered survey data about college student publications. In this case they learned about how to construct a survey questionnaire; make survey calls; and also learned about what their peers felt their schools student newspaper. In the second example, students conducted a content analysis of newspaper web pages. In the third case students engaged in a major survey about citizens' opinions about the Olympic Games before the 2004 Olympics. Finally, a fourth student group gathered student opinions about the Olympics after the 2004 Olympics. In all cases students were gratified to work on real projects and all projects results in either a research presentation or a publication.

These examples demonstrate how such projects can help students with realistic classroom exercises, as well as faculty who have limited time and other resources to engage in data gathering.