NKU

2008-09

FACULTY
Development Programs

NORTHERN KENTUCKY UNIVERSITY

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INTRODUCTION

Faculty Development Programs At Northern Kentucky University

This publication summarizes the activities and work of Northern Kentucky University faculty who were supported by the university's faculty development programs during the academic year of 2008-09 and the summer of 2009. Three faculty development programs are currently in place at Northern: sabbatical leaves, summer fellowships, and project grants.

Sabbatical Leaves are granted by the university to promote the professional growth and effectiveness of the faculty. Sabbatical leaves are granted to enable recipients, based on merit, to devote additional time to scholarly activity and research, advanced study, or artistic performance – all in pursuit of academic objectives. Tenured, full-time faculty and department chairs are eligible to apply for sabbatical leave. In 2008-09, 16 faculty members were approved for sabbatical leave, of which two were postponed due to administrative reasons.

Summer Fellowships provide funds to support professional development during the summer months. Examples of types of activities that may be applicable include: improving teaching skills; research; scholarly writing; creative or artistic projects; preliminary studies and literature searches; and attending seminars or courses related to one's field or professional work. Full-time tenure-track or tenured faculty may apply for a faculty summer fellowship. Each of the 14 faculty members awarded a fellowship for summer 2009 received an award of $6,000, for a total of $84,000.

Project Grants provide funds to pay expenses, purchase equipment, and to cover other financial needs for sabbatical leaves, faculty summer fellowships, and for other instructional, scholarly, and creative activities where financial support is not available through department budgets. Full-time tenure-track or tenured faculty may apply for a project grant not to exceed $6,000. In 2008-09, 11 faculty members received a project grant, for a total of $50,000.

As illustrated in this publication, Northern's faculty development programs have enabled our faculty members to undertake important work and accomplish great things!

SABBATICAL LEAVE 2008-09

Kimberly Allen-Kattus, Department of Visual Arts

Asian Art Study

I began teaching the Survey of Asian Art several years ago. Since my background had been in western European and American art history, this opened an entirely new field of research. At the same time I had also been developing and teaching a new course, Art Now, that involved the study of contemporary art. These two areas of research converged in a growing fascination with contemporary Asian art that I hoped to further enrich through the research of both ancient and contemporary Chinese art. During the past few years I presented papers on contemporary Chinese art at several national and international conferences. It was at one of the conferences that I met a colleague from Lingnan University in Hong Kong. Dr. Sophia Law requested that I present a paper on contemporary Chinese art at Lingnan. This paper, which I hope to publish, became one of the primary tasks of my sabbatical.

Photo: Jockey Club Garden, Tsun Wan, (Spatiality)

Photo: Tsang Tai Uk, Sha Tin, Hong Kong, Taoist Shrine (Spatiality, multi-sensory; multimedia)

I spent much of my sabbatical researching ancient and contemporary Chinese art. My research revealed some of the critical problems that still face contemporary Chinese artists today mirrored issues Chinese artists had faced throughout the twentieth century, among these the struggle between tradition and modernism. Through my research I became increasingly engaged in the Chinese approach to space and the depiction of three-dimensionality, particularly in light of the contrast between Eastern and Western ideas concerning spatial representation. It was this theme then that formed the nucleus of my paper: "Finding the Eternal in the Transitory: Contemporary Chinese Sculpture, Spatiality, Temporality and the Fourth Dimension."

My paper was well received and while in Hong Kong I initiated connections that led to an exchange program between Northern Kentucky University and Lingnan University. In Hong Kong I studied art in the museums as well as temples and gardens and discovered the traditional Chinese approach to space and temporality was a significant and ubiquitous element paralleling in many respects contemporary explorations of the fourth dimension. The Chinese in fact, surpassed the evocation of the fourth dimension both in their past as well as their contemporary art; in many respects negotiating the art viewer into what might be called the fifth dimension, a multi-media, extra spatial and extra temporal world that might find its source in the intense political and social ferment evident both in Mainland China and Hong Kong, where shifting economic and political paradigms are obviously reflected in the dynamic artistic culture developing among Chinese and Chinese expatriate artists today.

Integrated Middle School Content Area Reading Framework with Handheld Computers: Phase One-Examining Reading Comprehension

PROJECT GRANT 2008-09

Kevin Besnoy, Department of Teacher Education

Lane Clark, Department of Teacher Education

Based on our yearlong project of integrating Palm Pilots into two eighth grade social studies classrooms, we learned that this technology tool can affect the reading process and has the potential to improve content area literacy in the middle grades. One of the significant enhancements that we discovered was that students positively responded to being able to manipulate the text of the Palm Pilots as they read. In addition, this medium impacted students' motivation, their ability to chunk text, keep focus, and control the pacing. Finally, we explored innovative ways to connect content area literacy strategies with this technological tool.

We have had three national conference proposals accepted:

- Clarke, L. W. & Besnoy, K. (November 2009). Connecting the Old to the New: Enhancing Content Area Literacy Through the Use of Palm Pilots. To be presented at the annual meeting of National Council of Teachers of English National Conference, Philadelphia, PA.

- Besnoy, K. & Clarke, L. W. (November 2009). Improving Content Area Literacy Through Digital Text. To be presented at the annual meeting of National Council of Social Studies (NCSS), Atlanta, GA.

- Besnoy, K. & Clarke, L. W. (November, 2009). Do we speak the same language? Digital literacy in the gifted middle school classroom. To be presented at the annual conference of National Association for Gifted Children, St. Louis, MO.

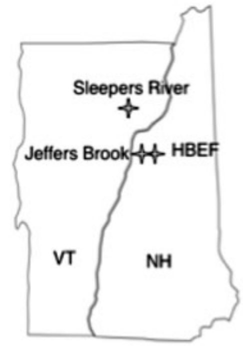
Additionally, we submitted a manuscript titled: "The Text, Reader and Activity: Using Palm Pilots to Enhance Content Area Literacy" to the *Journal of Adolescent and Adult Literacy*. We hope to continue to share our findings and to use the results of our study to pursue larger, external grants.

SABBATICAL LEAVE 2008-09

Effects of Calcium and Aluminum Soil Availability on Foliar Physiology and Chemistry in Red Spruce (Picea rubens) and Balsam Fir (Abies balsamea) in Northern New England

Richard Boyce, Department of Biological Sciences

I spent my sabbatical based at the Northern Research Station of the USDA Forest Service in Burlington, Vermont, working with Paul Schaberg from the Forest Service and Gary Hawley from the University of Vermont. I focused on stresses caused by calcium (Ca) deficiencies in soils on two tree species in the northeastern US, red spruce (Picea rubens) and balsam fir (Abies balsamea). Deficiencies can occur when soils are exposed to acid deposition for long periods of time, which has been true in the Northeast. Not only do acids wash out nutrients such as calcium, but they can also mobilize aluminum (Al), which is usually immobile and inactive in soils; when it is mobilized by acidity, it can have toxic effects on plants. My work was carried out on spruce and fir saplings at Hubbard Brook Experimental Forest (HBEF) in Woodstock, NH, where a calcium and aluminum fertilization experiment has been carried out called NuPert (for Nutrient Perturbation). In order to expand the applicability of my findings, I also carried out related work at two nearby sites, one with relatively high calcium (Sleepers River, VT) and one with relatively low calcium (Jeffers Brook, NH) soil levels, also on spruce and fir saplings.



Locations of research sites

I used 3 methods for assessing stress: chlorophyll fluorescence, enzyme activity and foliar nutrients. Chlorophyll fluorescence is a quick, non-invasive and non-destructive technique for determining stress levels in plants. At HBEF, high soil Al increased stress, while high soil Ca ameliorated it for both spruce and fir. Sleepers River saplings were also less stressed than those at Jeffers Brook. Ascorbate peroxidase (APX) activity, which is depressed by stress, followed the same trend at HBEF as chlorophyll fluorescence, with highest levels in the Ca-fertilized and lowest levels in the Al-fertilized plots. Foliar Ca and Ca:Al ratios were also depressed at the Al-fertilized and enhanced at the Ca-fertilized HBEF site for both spruce and fir; similar results were found across the natural soil gradient at Sleepers River and Jeffers Brook. These results indicate that low soil Ca levels are inducing stress in these two species, even though there are currently no visible signs of it at any of these sites. A surprising finding was that fir appeared to be more stressed than spruce, and this trend was consistent across all sites. This was surprising because spruce has been shown in the past to decline when stressed by low Ca, but fir has not. However, fir saplings at all of these sites had been heavily browsed by moose, while spruce was not, and this may account for this difference.

These findings have been reported at the University of Kentucky Center for Ecology, Evolution and Behavior's Spring Research Symposium in May and at the Hubbard Brook Annual Meeting in July. Results will be submitted for publication when foliar sugar analyses are completed.

Quality in Teacher Education

SABBATICAL LEAVE 2008-09

Rachelle Bruno, Department of Teacher Education

My sabbatical leave included multiple projects aimed to improve teacher education both within NKU and on a national level. Within the university, I focused on our special education program to prepare teachers of students with learning and behavior disorders (LBD). With my colleagues, I carried out a follow up study of those who completed one of our three special education LBD programs within the past five years to determine their perceptions of their preparation programs and factors in their teaching positions that have led them to continue or not in this field. I also led the development of submitting our materials for national recognition of our LBD programs. We received word in July that all three of these programs have been nationally recognized by the Council for Exceptional Children and the National Council for the Accreditation of Teacher Education.

On the national level, I led a Task Force for the National Council for the Accreditation of Teacher Education to develop a framework for teacher education standards in all fields. The task force consisted of six individuals who represented groups of teachers and other school professionals. There are many differences in format, specificity and relationship to current research among the standards that the specialized professional organizations (e.g. National Council for the Teachers of English, National Association for the Education of Young Children) have for teachers. After a careful review of the literature and discussions with many stakeholders, my task force developed four principles around which all of these organizations should develop their standards. We also developed guidelines for assessments and materials to assist teacher preparation programs. The Task Force proposals were approved by the Specialty Area Studies Board of the National Council for the Accreditation of Teacher Education in October, 2009. It is hoped that this consistency that comes from a research base will lead to a more unified voice for the field of teacher education.

The Gothic Rebellion: Confronting Fear and Challenging Social Norms in Literature, the Arts, and Society

SABBATICAL LEAVE 2008-09

Paige Byam, Department of English

My sabbatical during the 2009 spring semester was productive and invigorating for me as a teacher. My current project is the culmination of many years of research, writing, and conferencing. All of my research and course development is related to this project, and it has been very beneficial to have the time and support to work on it.

Each year I teach a popular course called "The Gothic in Literature and Arts." Researching the Gothic, mystery and narrative theory has directed and shaped my teaching: As a result of my interests and research, I developed ENG 465: The Gothic in Literature and the Arts, which I first taught as an intersession course summer 2000. Since then, I have taught this class every year, with great success. In this class we look at the historical background of the Goths, the Gothic as it developed as a literary form, and we focus on the Gothic in film, art, and architecture. The class visits the art museum, a cathedral, and a local cemetery to put some of our research into practice in identifying and discussing the Gothic.

During my sabbatical, I worked on several chapters of this project, outlined in my book proposal, which cover the Gothic Novel, Gothic film, and popular Goth culture today. The purpose of the book that I am working on is to trace the fascination that people—in various disciplines, through various time periods—have had for the Gothic. The concept of the Gothic has been re-defined or adapted for different audiences in different time periods, but even though it is used in disparate ways, several common threads can be identified. While I am very interested in the theoretical approaches to the Gothic, in this book I am more focused on how the Gothic has been used by and is useful to many people. In this way, my book bridges the gap between an academic audience and a popular one.

Because of the sabbatical, I now feel that I have a better understanding of the Gothic connections that I have been researching and teaching. Besides writing and submitting my own work, I will continue to bring my knowledge and research to my students in my courses and in my independent work with Honors students and graduate students.

SABBATICAL LEAVE 2008-09

PROJECT GRANT 2008-09

Ann M. Dollins, Department of Advanced Nursing Studies

Book Development/Publication: Questioning the Future Existence of Nursing

This effort involved the development of a position regarding the future of nursing. More specifically the topic was the questionable future existence of nursing as a profession. I examined a confluence of factors that could bring about either 1) the premature end of the profession or 2) a significant reconfiguration of the profession. Either of these changes is important as nursing constitutes the largest group of health care providers in the United States. Any change in the status or existence of this group could bring negative changes for the public and its health.

This work required that I acquire new or update existing knowledge related to areas such as technology, demographics, philosophy and practice and education trends. One other area that I needed to develop skills within was the new discipline called Future Studies. I believe this discipline can assist nursing in not just anticipating the future but in creating a new preferred future. For Future Studies the strategies for knowledge generation and problem solving are derived from the intersections of complexity theory and the social sciences. These intersections enable the consideration of differing futures within a framework that examines instability, change and uncertainty. This discipline offers a number of strategies to generate knowledge and information that can be used to solve real world problems.

The work did produce data that could support the unfolding of a very negative future for nursing. From this data future scenarios were generated that illustrate the possibility. I still believe that by examining these scenarios and other data the profession could learn how to avert this possible but not preferred future. The increased understanding derived from this consideration could lead to designing and bringing about a profession better positioned to create the future than simply respond to it.

One of the experiences of this project was the strong resistance from those in the profession to consider the possibility of a significant negative future for the profession. Given this barrier, it was decided to take a different tack in disseminating the ideas developed from the sabbatical. I am developing manuscripts for professional journal articles and presentations at professional conferences. I am also developing a blog. The name of the blog is Nursing’s True North: Charting a Preferred Future.

I believe this project has also enriched the learning experiences I offered to undergraduate and graduate students this semester. This work has required me to think “out of the box”. I drew from my learning to help students with critical thinking experiences that required a different way of viewing professional realms of interest.

The Impact of Kentucky's Mathematics Intervention Teachers on the Teaching and Learning of Mathematics

SUMMER FELLOWSHIP 2009

Sara Eisenhardt, Department of Teacher Education

In March 2006, the Kentucky Center for Mathematics (KCM) was formed through an appropriation given to Northern Kentucky University with the goal of enhancing the teaching of mathematics at all levels, as well as maximizing student learning within the state of Kentucky. The KCM Intervention Program is in its third year and there are 113 Mathematics Intervention Teachers who provide mathematics intervention to over 1,000 students in 45 schools across Kentucky. The findings of a 2006-2007 Evaluation Summary indicate that the students receiving mathematics intervention made substantial improvements over the year and outperformed the students in the comparison group on the post test, even though the comparison group scored significantly higher on the pretest. There was also a significant increase in teacher content knowledge and improved attitude towards mathematics as measured by the Learning Mathematics for Teaching Test and the Mathematics Beliefs and Attitudes Survey.

Of the schools that employed a KCM Mathematics Intervention Teacher, many reported significantly higher achievement of non-intervention students at the primary and even at the intermediate level--where there is no formal mathematics intervention. This study served to provide the missing data to help explain how the Mathematics Intervention Teacher and the intervention students impacted higher mathematics achievement across the school. Specifically this projected investigated the impact that the Kentucky Center for Mathematics Intervention Teachers has on systemic change in their respective schools and across Kentucky.

Findings

The KCM Mathematics Intervention Teachers affects not only the students they directly serve, but also the students and teachers around them. This finding is supported by data from student achievement tests, teacher and administrator surveys and semi-structured interviews. In buildings where there is a MIT, students are achieving at higher levels and are more motivated to learning mathematics. Intervention students demonstrated significant achievement gains; in some cases, intervention students became high-achieving. Classroom teachers and building administrators report that those intervention students who saw themselves as unable to learn mathematics now see themselves as capable to high achieving math learners. Classroom teachers report that the intervention students are participating more during mathematics instruction and are demonstrating deeper understanding of mathematics concepts. Every teacher reported that were significant gains in the intervention students' motivation and attitude toward learning mathematics. Some schools report that these gains have spread to all/most students.

MITs report that their knowledge of numeracy development coupled with their knowledge of assessing students' development results in deliberate, strategic and focused instruction at child's zone of proximal development. They report that they never knew that there was so much to know and understand about how children develop an understanding of numbers and they did not have the knowledge of numeracy development and the knowledge for teaching numeracy. The training that the MITs received impacted their knowledge of early numeracy development, their ability to analyze and diagnose learning deficits, and their ability to provide instruction that advanced student learning. Overwhelming, the teachers report that they teaching with a great emphasis on developing understanding and less on the surface features of "doing as I show you." With increased knowledge of how children learn mathematics and effective instructional strategies and resources, teachers have shifted their teaching from an emphasis on procedures to teaching concepts. Teachers report that they are engaging students in talking mathematics, using more materials and resources (including technology), using more open-ended activities and problematic tasks, and using more flexible grouping driven by assessment data. Teachers report that the implementation of math talks, games, math materials and technology resulted in all students being more actively engaged in learning mathematics.

MITs functions as on-site math specialists. Teachers seek advice from the MITs regarding instructional strategies, diagnosing student learning, and effective materials and resources to increase student learning of mathematics. With a MIT in the building, teachers have access to ongoing, job-embedded effective professional development in mathematics. They report having a much more comprehensive knowledge of how students learn mathematics and what mathematics is important for students to learn. Teachers report they are able to teach with greater content depth, are more strategic in the selection of topics and the instructional delivery of mathematics and are able to differentiate to meet the diverse needs of students, particularly the higher achieving students. Teachers report that they are teaching at a higher level and teaching more mathematics. Teachers have more positive attitudes towards teaching mathematics and share this excitement with students.

MITs have implemented school/district structures to better support the teaching and learning of mathematics. In every school, MITs and primary teachers collaborate in the planning of instruction and MITs collaborate in the teaching of mathematics in primary classrooms. In many schools, the instructional time devoted to teaching mathematics has increased to 60 or 90 minutes a day. Many schools and districts have adopted research-based mathematics textbooks, replacing those that emphasize isolated procedures. MITs have played a major role in the development of district curriculum maps and benchmarks. MITs collaborate with teachers and conduct Math Nights for parents (in one building parent participation increased from 10 parents to 400 participants). One district, wherein there is one MIT in every elementary school, MITs facilitate quarterly district-wide grade-specific mathematics professional development for all K-5 teachers.

In summary, MITs are catalysts for systemic improvements in the teaching and learning of mathematics. The MIT Program has cast a light on the teaching and learning of mathematics. Achievement gains of the intervention students, typically the lowest performing students in the building, have prompted teachers to rethink why some students struggle learning mathematics. The focus of teaching mathematics has shifted from teaching to the text to teachers examining how they are teaching mathematics. Schools have developed professional learning communities focused on the teaching and learning of mathematics.

Research on Why Local Governments Use Special Districts

SUMMER FELLOWSHIP 2009

Jayce Farmer, Department of Political Science and Criminal Justice

The funded fellowship stipend was used towards the development of research in the area of public administration. Specifically, this project entails studying special districts as alternative local government service mechanisms. The primary hypothesis is that special districts may be able to absorb services with extremely high transaction costs due to their abilities to act simultaneously as governmental units and as private entities. The secondary hypothesis is that localities will use special districts as inter local contracting mechanisms when these governments are restricted by state mandates from forging such contracts.

The majority of this project's work entailed data collection and analysis. Data on special district governments are very sparse. Therefore, a considerable amount of time was spent searching for relevant forms of special district data that were useful in the conceptualization and development of this project's dependent variable. A considerable amount of time was also spent in the management and analysis of data that led to the creation of several key independent variables. The finished product resulted in a massive data set that entails over 13,000 cases of local government special district usage and factors related to such usage. Models have been run on these data using statistical analyses, and have provided pertinent information that has been deemed as being useful in the development of this research. These statistical models are currently being used in the finalization of a paper that is being prepared for submission to a peered reviewed journal. The data and information acquired from this work are also being used in the development of a book chapter set to be part of an edited series on localized regional governance.

Curricular Trends and Policies within Urban Education Reform

PROJECT GRANT 2008-09

Doug Feldmann, Department of Teacher Education

This Faculty Project Grant was utilized for brief travel to Philadelphia, Pennsylvania in July 2008 for examination of curricular documents and experimental programs in pedagogy at two separate school districts (those of West Chester, Pennsylvania and the Philadelphia Public Schools). Examination of these documents was pursuant to the completion of the researcher's series of professional journal articles on urban curriculum studies, which is investigating instructional trends and strategies currently at work in various urban schools in the United States, and speculation as to the future efficacy of these trends and strategies. The data collected from this research proved extremely valuable to this overarching project.

A majority of the researcher's time during the project was spent at the offices of the Philadelphia Public School District, located at 440 North Broad Street. While at these offices, the director of research and evaluation for the district (Dr. Michael Schleisinger) provided the researcher with a wealth of data on student performance and the demographic structure of the city school system, as well as direction to several other key informants on this topic within the district offices. Research conducted at the nearby West Chester district provided pertinent baseline data for comparison with this larger, neighboring, urban district.

The researcher was pleased with the work he was able to complete as a result of the Project Grant, and is certain the data collected will enhance the quality of his new publications in the professional literature.

SABBATICAL LEAVE 2008-09

Gina M. Foletta, Department of Mathematics and Statistics

Teachers' Mathematical and Pedagogical Knowledge: Delving Deeper

The idea for this project emerged out of my work in two major areas: Prospective secondary mathematics teachers in their content courses, methods courses, practicum and student teaching experiences; and, in-service mathematics teachers through graduate mathematics courses and workshops. Teacher content and pedagogical knowledge is a growing concern to the mathematics education community (National Research Council, 2001; Wilson, 2002; Ball, & colleagues, 2005). In an effort to further the research in this area, I worked as a research associate in collaboration with The Pennsylvania State University mathematics education faculty in a major project through The Mid-Atlantic Center for Mathematics Teaching and Learning. The National Science Foundation under Grant No ESI0087447 (renewed under ESI0426253) to the University of Maryland (Jim Fey, PI) with a major subcontract to The Pennsylvania State University supports this center.

The major work done during the sabbatical year was the collection and initial analysis of data about an experienced mathematics teacher and nine emerging mathematics teachers' relationship between classroom practices and content knowledge, each a subject of a case study. The set of sites represented four states; middle school, junior/senior high school and high school settings; charter schools and public schools; rural, suburban and urban schools; and a range of economic settings. In addition to the site visits I worked with the research team on the analysis of one of the case studies and continue to work on the refinement.

The immediate product is a robust data set. The data from three cases were used for a symposium at the 2009 Research Presession of the American Educational Research Association/Special Interest Group on Research on Mathematics Education and Research Advisory Council at the National Council of Teachers of Mathematics and for three papers presented at the 2009 annual meeting of the American Educational Research Association. I am one of five co-authors for one of the papers presented. This paper is evolving into a journal submission.

Impact within Northern Kentucky University is seen in several courses. Members of the mathematics education group are working on developing a technology course for our secondary mathematics majors. Classroom episodes from this data set will be a basis of the course. I am sharing episodes from the project artifacts with Dr. Noblitt, the instructor for the secondary mathematics methods course. I am using project artifacts to improve and revise the geometry course taken by our mathematics majors.

The project also strengthened my understanding of current secondary curriculum and classroom pedagogy. This has and will continue to enhance my interaction with our preservice secondary mathematics teachers.

Anton vs. Allen: The Difference a Name Makes in Short Listing and Hiring Decisions

SUMMER FELLOWSHIP 2009

Kathleen Fuegen, Department of Psychological Science

The purpose of my project is to investigate the influence of race and gender stereotypes on short listing and hiring decisions. Considerable research in psychology and sociology shows that names (and the demographic categories they denote) affect inferences of competence and, by extension, employment decisions. My own research shows that manipulating the name on a résumé (e.g., Denzel or David; Katherine or Kenneth) affects hiring as well as firing decisions: despite having identical employment records, Kenneth is more likely to be hired than Katherine, and Denzel is more likely to be fired than David.

In the project for which I was awarded a Summer Fellowship, I designed an experiment in which undergraduate research participants evaluated the résumés of fourteen fictitious job applicants. These applicants were assigned either typical Black, White, male, or female names. Participants then chose five applicants to place on their short list and one applicant to hire. I expected that gender and race stereotypes would make it easier for Blacks and women (than Whites and men) to make the short list. However, despite their representation on the short list, Blacks and women would be less likely to be hired. This is the pattern I found in the data: though women comprised 49% of the short list, they were hired only 11% of the time; though Blacks comprised 47% of the short list, they were hired only 14% of the time. These findings support the theoretical perspective that stereotypes lead persons to set lower minimum standards (or, initial screening criteria) but higher confirmatory standards (or, criteria designed to assure that one has the ability to perform a task) for members of social groups that are negatively stereotyped in terms of competence.

Can Work Process Innovation be Incentivized? The Influence of Monetary Rewards and Goal Structures on Innovation in Organizations

SABBATICAL LEAVE 2008-09

Richard Gilson, Department of Management

During my Fall Semester sabbatical I worked on three research projects that were in different stages of completion. I also developed a graduate level course for the new Executive Leadership and Organizational Change Masters program (ELOC). I discuss each of these projects below.

The first project involved the development of a study co-authored with a colleague working in Korea. In this study we proposed a model to explain the impact of goals, rewards, and social value orientation on work behaviors. In brief, goal and reward structures can shape perceptions about whether the work situation is one in which goals and associated rewards are best reached through individual efforts, competitive efforts, or cooperative efforts. This perception will influence how people behave in the situation- the extent to which they engage in self-oriented behaviors and team-oriented behaviors and also whether those behaviors are positive or negative in respect to the work team. For example, positive self-oriented behaviors include exerting a great deal of effort in task performance. Negative self-oriented behaviors include hoarding resources, keeping information to one's self, and blocking others' performance. Positive team-oriented behaviors include sharing resources and information, collaborating on tasks, and helping other members perform their work. Negative team-oriented behaviors include social loafing- riding on the coat-tails of other team members and not doing a fair share of the work.

The results of the study show that goal structure, reward structure, and an individual's predisposition to cooperate or compete all influenced perceptions of social interdependence. An interesting and unexpected finding was the impact of a mixed goal structure on perceived social interdependence. Instead of having a group goal alone, having both a group and an individual goal appeared to produce a more positive perception of social interdependence. In a similar way, individuals who were rewarded for both individual and group performance reported the most positive perception of social interdependence. We could offer no theoretical explanation for this finding, since the few studies to address mixed rewards (e.g., having both individual and group components) found that mixed rewards tend to disrupt team work in situations having higher task interdependence. In addition, the more positively respondents viewed their social interdependence, the more likely they were to engage in cooperative pro-group behaviors and positive competitive behaviors and the less likely they were to engage in negative competitive behaviors that undermine group performance. This study has important implications for how organizations design reward systems, interdependent tasks, and work teams. We are currently revising this manuscript to address the comments and suggestions made by the editor and reviewers of the *International Journal of Human Resource Management.*

The second research project involved the elaboration of my model of team support for innovation to take into consideration recently published research and to better account for findings in my prior research on the topic. In this paper I developed a model of work team innovation that used the expectancy theory of motivation to frame how several team and task constructs influence team support for innovation and therefore indirectly promote team innovation. This research will help fill a gap in the sparse research of innovation in work teams and builds an argument for the importance of expectancy theory as a motivational process underlying innovative behavior in organizations. I am working to complete the data analysis and testing of the revised model and plan to submit the completed manuscript to the Group and Organizational Management Journal in Spring 2010.

The third research project involved the initiation and conceptual development of a model that integrates my interests in team innovation and the influence of reward and goal structures on social behavior. The basic research question is "can work process innovation be incentivized?" There has been a fair amount of contention among management scholars about the influence of monetary rewards (incentives) on innovative behaviors in organizations. Contributing to this lack of agreement are the relative paucity of studies addressing the influence of pay on innovation in work organizations which tend to show that monetary rewards are usually more effective in promoting greater effort in narrow task performance but are less effective in promoting collaboration and information sharing among employees- behaviors that are seen as essential for organizational innovation. Since organizations often use monetary compensation and performance goals to motivate various types of performance, it is important that we learn how various types of compensation and goals will influence innovation-related behaviors and cooperative and competitive behaviors in work teams. Since this is the newest project and the two projects discussed above are my current research priorities, I expect to be able to complete the theoretical framework and research design during Summer 2010 and then proceed with data collection in several organizations in Fall 2010.

Improving Online Learning Experience for Mobile Learners

SUMMER FELLOWSHIP 2009

With the support of the Fellowship, I conducted the following research tasks:

I used mobile agent technology to develop migratable content adaption agents. I used cloud computing technology to develop a cloud to support agent migration. The cloud based content adaption system can improve the utilization and efficiency of the existing computing resources and achieve better system performance.

I developed a weighted link graph approach to rank the links on the web page based on quantitative computation. Links with higher weight values are considered as “hot” links. Links with lower weight values are considered as “cold” links. Based on the weight values, the layout of the links is arranged to reduce mobile learners’ clicking and scrolling.

Based on the research findings, I wrote a paper titled “Cloud Based Content Adaptation System for Mobile Learners”. The paper was accepted at 7th IEEE Consumer Communications and Networking Conference (IEEE CCNC 2010).

Wei Hao, Department of Computer Science

Cicada Killer Wasp Research

SUMMER FELLOWSHIP 2009

Jon Hastings, Department of Biological Sciences

The Summer Fellowship enabled me to devote the entire summer to an ongoing study of cicada killer wasps. The research effort consisted of four different phases:

Completion of a manuscript for publication: This paper summarizes research conducted with Dr. Chuck Holliday of Lafayette College (Easton, PA); Dr. Andy Long (NKU Math) and two of his undergraduate students are also coauthors. The paper discusses how body size of individual wasps influences their choice of cicada prey. The paper, entitled “Size-selective Provisioning by Cicada killers, Sphecius speciosus (Hymenoptera; Crabronidae), in North Florida” has since been accepted for publication by the journal, Florida Entomologist, pending revision.

Molecular systematics of New World cicada killer wasps: This is a continuing study of evolutionary relationships among different species of cicada killers using DNA analysis. Among the findings are that the western cicada killer (Sphecius grandis) is actually two different species that are indistinguishable in appearance, a phenomenon referred to as cryptic species.

Study of hunting preferences in populations of eastern cicada killers in Alabama and Florida that hunt a wide variety of prey species: We tested predictions presented in the aforementioned manuscript (1 above). We found that small individual wasps are constrained to hunt small cicadas, and large wasps prefer large prey, even when small prey are abundant.

This Summer Fellowship was coupled with a Fall-semester sabbatical leave, which enabled me to study a little-known species, the Pacific cicada killer (Sphecius convallis) with two colleagues in the ghost town of Ruby, AZ located in the rugged, arid mountains near the Mexican border. A huge colony of 10,000 wasps was active from late July–early October there this year. We camped next to the colony for nearly eight weeks, which allowed us to study their behavior, ecology, and physiology day and night for an entire annual cycle of activity. Our most unusual finding was of the prevalence of kleptoparasitism, theft of prey, explained below:

Female S. convallis provision underground nests with large cicadas, which they capture and paralyze in nearby trees, and carry in flight to their nests. The cicadas are fed to offspring. Provisioning is difficult; we found that, on average, each provisioning event required about eight hours of female effort. As food is generally scarce in desert environments, the cicada provisions are attractive to a variety of animals.

The Provisioning females, heavily burdened by their loads, had to run a gauntlet of king birds in the air and road runners on the ground; the birds were adept at stealing the cicadas from the wasps. Additionally, female cicada killer wasps used a variety of tactics to steal cicadas from each other. Life is tough in the desert! The accompanying image is of a female Pacific cicada killer wasp carrying a paralyzed cicada to her nest; the heavy load makes her vulnerable to attack by kleptoparasites.

SABBATICAL LEAVE 2008-09

PROJECT GRANT 2008-09

Mary Carol Hopkins, Department of Sociology, Anthropology and Philosophy

Changing Roles of Traditional Women Artists in West Africa

With the sabbatical leave and project grant, I was able to carry out the following planned projects: continuing research on women artists of Ashanti, Ghana; beginning research on women artists in Mali; and preparations for five Ghanaian artists to present an Institute on African art at NKU in 2011. With an additional grant from the National Endowment for the Arts (NEA), I was able to carry out two additional projects, an African Arts workshop for teachers and the production of five films on Ashanti arts.

I made continued progress on my research on the changing roles of women artists of Ashanti, Ghana, filming and interviewing three women artists (June 29-August 1), two of whom are engaged in an art form (weaving) which has been and still largely remains forbidden to women.

In January, I conducted initial research on women artists among the Bamana, Dogon, and Tuareg. I also collected many materials, such as textiles, dyes, tools, masks, musical instruments, and raw materials for teaching my anthropology classes, including World Cultures; Peoples of Africa; Women, Gender, Culture; African Arts; and Arts and Culture. I have also used these materials to present a workshop for teachers at the University of Kentucky. I studied, filmed, and collected materials on textiles (spinning, weaving, dyeing), pottery, silverworking, plastic beadmaking (a new art form), masks, dance, and music, and participated in

some of these processes. I am using these materials in my classes and in workshops for Kentucky teachers, and will also make these materials available to colleagues at NKU and to Kentucky teachers.

I made progress with preparations for five Ghanaian artists, including those women noted above, to present a ten-day African Art Institute for Kentucky Teachers, to take place at NKU during the summer of 2011. To fund this Institute, I submitted a proposal to the National Endowment for the Arts on June 11, 2009.

I also spent five weeks in Ashanti during the summer of 2008 and during the spring and summer of 2009 put together a five-part film on Ashanti art. This series of five films, supported by a grant from the NEA, is now completed and has been distributed to art teachers in Kentucky and will be presented at an anthropology conference in Milwaukee in April 2010.

Finally, I purchased, with NEA funds, African art samples and materials to conduct African Art workshops for Kentucky teachers which were presented in Oct. 2008 and Aug. 2009.

Does "Hot Money" Drive China's Real Estate and Stock Markets?

SUMMER FELLOWSHIP 2009

Ying (Sophie) Huang, Department of Economics and Finance

It is estimated that the aggregate "hot money" that flowed into China during 2003 to the first quarter of 2008 was about $1.75 trillion dollars. The speculative capital flowing is believed to have fueled inflation, driven up stock prices, and helped accelerate a worrisome bubble in the real estate market. However, there is little evidence in the extant literature on the role of "hot money" in the recent evolvement of China's real estate and stock markets, and the empirical question of to what extent the "hot money" factor is transmitted to the behavior of housing prices and stock prices remains unaddressed. The objective of my summer fellowship research was to explore and shed more light on this issue, which not only warrants a timely study but also could be of considerable concern to scholars and policymakers worldwide.

Using monthly data from January 1997 through October 2008 retrieved from the CEIC Database, the paper investigates the key issues and several important conclusions have been derived from the analysis. The results indicate that "hot money" has driven up property prices as well as contributed to the accelerating volatilities in both markets due to its enormous size and its short-term characteristic of investing. In particular, "hot money" ranks as the second largest contributor in the fluctuations of China's real estate prices. In the "risky" regime, which corresponds to the more inflows and higher volatility of "hot money", the effects are even more prominent.

After carefully revising the paper according to an anonymous reviewer's comments and suggestions, the paper has been accepted for publication in International Review of Economics & Finance, which is a highly regarded academic refereed journal in the field of economics and finance, and is published by Elsevier and listed in the Social Science Citation Index (SSCI).

SUMMER FELLOWSHIP 2009

Parmita Kapadia,
Department of English

Citizenship in an International World: The Diasporic Identity

My project is a book-length study that examines the impact of postcolonialism and globalization on diasporic individuals and their communities. I investigate how increasing globalization has prompted an evolution of the diasporic identity from its traditional politically-based roots to include more recent economically and culturally motivated migrations.

The term “diaspora” has evolved and expanded considerably from its classic associations with the expulsion of the Jews from their homeland. Expelled from their origins in Palestine, these exiled communities established both memory of and loyalty to this place of genesis. This fealty to place, to return to a geography and thus imbue it with cultural, ethnic, religious, and historical significance, marked the classic model of the diasporic condition. However, the term diaspora has experienced a palpable shift in recent discourse as its definition has been amplified to suit an ever-widening range of communities. I examine how the diasporic identity has changed because of the recent rise of postcolonialism and increasing globalization. The conditions of globalization and transnationalism—whether rooted in politics, economics, culture, or technology—demand an attentiveness to the emergence of displaced, dispersed, peoples and their communities. I argue that in the current global climate it becomes necessary to move beyond diaspora scholarship’s conventional attention to geography and place and, instead, to distinguish between types of diasporas. I suggest that traditional political diasporas, the exile communities, the refugees, and the asylum seekers, individuals and communities whose diasporic identity stems from politically-motivated forced movement, constitutes one type of diaspora. Economic and cultural shifts--increasing globalization, greater economic internationalism, and cross-cultural transnationalism--have resulted in second type of diasporic community: economically- and culturally-driven diasporas such as expatriate communities, professional workforces, indentured servants, and study-abroad student populations. The emergence of these distinct diasporas prompts a rethinking of the field to de-privilege the conventional focus on the political milieu of a particular place and to include the experiences of immigrants, migrants, expatriates, professionals, servants as well as second-generation children for whom the longed for return “home” to a particular geographic place does not exist.

The Summer Fellowship gave me the opportunity to finish the proposal and submit it various prestigious presses. I am pleased to report that the book has been accepted for publication by Fairleigh Dickinson Press and will be forthcoming during the summer of 2010.

Fed Speak: A Market Microstructure Analysis

The social costs associated with impaired market liquidity may be significant, as low liquidity tends to increase transactions costs to investors and decrease the speed of price discovery. Accordingly, the Federal Reserve has placed considerable emphasis on making the formulation of monetary policy more transparent. While there exists considerable research on the effects of policy decisions on asset prices and return volatility, there is little evidence regarding the effects of monetary policy on market liquidity.

My study examines abnormal liquidity associated with monetary policy announcements. I find that liquidity tends to decrease significantly, relative to a control period, around the 30-minute interval in which the FOMC releases its policy decisions. This decline in liquidity tends to be larger when the surprise component of the policy target is larger. I also find evidence that liquidity tends to recover prior to the market close, but remains abnormally low for 1.0 to 1.5 hours after the scheduled policy announcement. For unanticipated announcements, the decline in liquidity associated with the announcement is particularly acute. Contrary to reports from the popular press, I find no evidence that liquidity is impaired in the hours preceding scheduled policy announcements. My results are robust to a panel regression that controls for other factors affecting liquidity.

My results offer insight into patterns of information-based trading around anticipated and unanticipated announcements. I find no economically significant variation in information-based trading prior to announcements. However, I find a strong surge in information-based trading after both anticipated and unanticipated announcements. The surge in information-based trading tends to be most acute for unscheduled announcements. These results are consistent with Kim and Verrecchia (1991), in that informed traders appear to have an advantage in information processing over uninformed participants.

For policy makers, my results indicate that the adverse liquidity effect associated with FOMC policy announcements could be reduced by minimizing the frequency of unscheduled policy announcements and by minimizing the surprise in the announcement. For traders and brokers, the short-lived nature (lasting typically less than two hours) of the liquidity effect of FOMC policy announcements suggests that they could avoid incurring larger trading costs by simply avoid trading within 90 minutes of the policy announcement. Finally, my results indicate that the adverse effect of FOMC policy announcements on the positive externalities produced by utilitarian traders when they use markets to conduct their business more efficiently may not be severe, again because of the short-lived nature of the liquidity effect of FOMC announcements.

I finished my research project and submitted it to an academic journal "Journal of Banking and Finance" which is a very respectful journal in finance. Currently, it is under second review.

SUMMER FELLOWSHIP 2009

Jang-Chul Kim, Department of Economics and Finance

SABBATICAL LEAVE 2008-09

Trina Koscielicki, Department of Allied Health

Radiation Safety Practices in a Digital Medical Imaging Environment

My recent sabbatical leave enabled me to complete research regarding diagnostic imaging practices at hospitals in our region. My research focused on radiation safety practices related to how imaging professionals monitor appropriate radiation exposure amounts for exams. I was able to review relevant research on the topic, develop a survey, visit area hospital radiology departments to talk with radiologic technologists and deliver the surveys, and compile and summarize the responses. I am still in progress with analyzing the results and completing a project for publication or presentation. This project evolved out of my desire to better understand what my students encounter in the clinical setting. In the radiologic technology program, my courses focus on the equipment and technical aspect of radiology. I wanted to make sure that what I am teaching reflects what students will see in practice, and that they can understand the reasoning behind any differences from what they learn in class. In order to accomplish this goal, I needed to gain insight from the technologists with whom my students work at the clinical site.

In the field of medical diagnostic imaging, digital imaging technology has largely replaced the traditional x-ray film imaging system. While the digital format provides many benefits, it has also presented new challenges to the imaging professionals who are responsible for obtaining the x-ray images. The goal of any x-ray exam is to optimize the diagnostic quality of images while minimizing radiation dose to the patient. In a traditional film environment, an excessive radiation exposure will result in an image that is not of diagnostic quality (too dark) and which will need to be repeated. In the digital format, the computer software rescales every image to be displayed with consistent brightness levels on the monitor, regardless of the radiation exposure level that created it. Instead of seeing a visually dark x-ray film that would need to be repeated, radiologic technologists must rely on numerical data provided by the computer system for each exposure. My goal for this survey was to investigate the technologists' understanding of this numerical data and to determine their opinions regarding the significance of it.

After reviewing literature, I developed a survey to be completed by radiologic technologists at several regional hospitals. I visited hospitals to discuss the project and deliver the surveys. After collecting completed surveys, I was able to compile the results and gain a better understanding of the current practices regarding the digital imaging systems. I have been able to use this information and help my students be better prepared for clinical application of theory learned in the classroom.

PROJECT GRANT 2008-09

Doug S. Krull, Department of Psychological Science

Unlocking Psychology: Keys to Understanding

This project grant pertained to my interest in writing an Introductory Psychology textbook. During a previous sabbatical I had prepared initial materials for publishers to review and had located a publisher (Houghton-Mifflin, now Cengage Learning) who was interested in my text. Since that time I have been writing. This project grant enabled me to hire a student assistant. I was fortunate to find a very capable psychology student, Jennifer Williams. She has been a big help. She compiled (in refworks) 22 references for an introduction/history chapter, 88 references for a biological psychology chapter, and 141 references for a chapter on sensation/perception/attention. Jennifer also provided useful comments on drafts. During the grant period I also wrote a chapter on learning (60 pages) and a chapter on health (60 pages). Now in Fall, 2009 I have completed seven of twelve chapters.

At the Intersection of Artists' Books and Applied Book Design: Exploring the Synergistic Relationship Between Personal Art-making and Creative Graphic Design

SUMMER FELLOWSHIP 2009

Julie Mader-Meersman,
Department of
Visual Arts

My 2009 Faculty Summer Fellowship helped to support artistic experimentation essential to my development as a practicing graphic designer. The fellowship dovetails with work proposed for my Spring 2009 Sabbatical. During the fellowship, I began generating a new body of experimental artist's books and mixed media collages, including development of my seminal project titled *When I Became a Woman*, which is an artist's book about the coming of age of 35 different women. Spending time developing personal artistic insight and technique through the making of mixed media works is allowing me to further cultivate unique, visual strategies in my applied graphic designs that are valued by clients for their creativity, aesthetic impact and meaningful user experiences for both targeted audiences and the broader public. The content for much of the artwork produced during this period contains reflection on subjects such as mass-consumption and contemporary American domestic life.

Examples of experimentations made during the fellowship include: creative uses for and combinations of images, paper and two-dimensional waste, reject and surplus materials; imaging and printmaking processes; hand-binding techniques; and unconventional book formats using matter discarded from domestic life, among other types of ephemera. I hosted a studio visit for curator Liz Maugans, and as a result, four of my works — including a major collage created during the fellowship entitled, Anywhere, USA — were selected to appear in the group exhibition, "The I of the Text" at the Riffe Gallery (the flagship exhibition space for the Ohio Arts Council) in May 2010. The piece is a manipulated map of the United States containing a transparent, superimposed image of a house with graphite rubbings and hundreds of cut-and-pasted country of origin tags from the backs and bottoms of product packages that have been purchased over time for my own household. I also spent a portion of the fellowship viewing and analyzing other artist's books and reading texts on handcrafting, visual objects, printing and imaging techniques, and the significance of the creative process. I am extremely grateful for the time and opportunities to create that this fellowship allowed and for the momentum it provides for my upcoming sabbatical work.

SUMMER FELLOWSHIP 2009

Cecile A. Marczinski, Department of Psychological Science

Implications of Mixing Energy Drinks and Alcohol on Subjective Feelings of Intoxication and Behavioral Control in College Student Social Drinkers

Alcoholic drink preferences in college students have shifted in the past decade, with trends in consumption leaning toward the mixing of energy drinks with alcohol (e.g., Red Bull and vodka). Despite the dramatic rise in the popularity of energy drink beverages, little laboratory research has examined the effects of energy drinks alone and mixed with alcohol. These mixed alcoholic drinks have been implicated in numerous problems, including traffic accidents and binge drinking. My research investigated the acute effects of alcohol and energy drinks, alone and in combination, on cognitive performance and subjective reactions to drinking in college student social drinkers. In this study, subjects received one of four possible beverages: alcohol, energy drink, alcohol mixed with an energy drink (AmED), or placebo. Following consumption of the beverage, subjects were asked to perform a cognitive behavioral control task and complete questionnaires that assessed subjective level of intoxication and impairment. The results indicated that participants who received the AmED beverage reported less mental fatigue and reported feeling less impaired compared with participants who received the alcohol beverage. By contrast, participants who received AmED or alcohol were equally impaired on a computer task that measured impulse control compared to placebo performance. Thus, AmED consumption may be increasing the risks of drinking alcohol beyond those typically seen with alcohol alone. If individuals act impulsively following consumption of AmED and yet feel less intoxicated than they would with a comparable amount of alcohol alone, they may engage in a variety of health risk behaviors such as drinking even more alcohol, driving while impaired, or engaging in risky sexual behavior. The results of this preliminary study indicate that social drinkers who have become enamored with AmED beverages should be warned of their potential effects. Funding for this project allowed me to generate important pilot data that was included in my recent application for a R15 (AREA) grant from the National Institute of Alcohol Abuse and Alcoholism at the National Institute of Health.

SABBATICAL LEAVE 2008-09

Melissa Moon, Department of Political Science and Criminal Justice

Married to the Force: The Impact of Police Work on Family Life

The primary focus of my research was on how police officers and spouses cope with the problems and pressures created by the special nature of police work. There is very little research exploring the negative spillover of police work to officers' families. Given this void in the extant literature, I proposed to investigate the impact of police work on the spouses and partners of police officer, or those "married to the force." I spent several months reading all the literature I could find on the "spillover effect." That is, how a person's job influences their home life (work-family spillover) and how their home life could affect their work life (family-work spillover). I also reviewed over 60 scales that have been used to measure work-family conflict, family-work conflict, role ambiguity/role problems, police stress, supervisory support, job dangerousness, work stress, work dissatisfaction, and organizational commitment.

Once my review of the literature was complete, I began creating my survey and consent forms. This process took a few months and included obtaining permission to conduct the survey from the IRB at NKU. Once the survey was approved, I began to organize the schedule with my contact at a local law enforcement agency to begin distributing my surveys. I solicited assistance from a graduate student for data collection and we decided it would be best to administer the surveys in person to the officers during roll call at each of the shifts (6:00am, 4:00pm and 10:00pm).

Data collection took approximately one month to get patrol officers, detectives, school resource officers, administrators and court services officers to complete the survey. We have estimated between 85-90% of eligible officers participated in the survey. The data was then entered into SPSS and analyzed in order for me to present at the annual Southern Criminal Justice Association meeting in Charleston, South Carolina in September, 2009. I anticipate that the first article will be submitted to a journal for review in early 2010.

In addition to the police officer survey, I began the process of obtaining a list of officer's spouses that will be surveyed during the second phase of this ongoing research project. Since there is no formal list of spouses of police officers, we have to use the snowball sampling technique--obtain our sample from interested spouses who give us the names of other spouses who might be interested. We hope to begin these interviews in the Spring and have all data collected in the summer.

Although not originally included in my application, I also took the time during my sabbatical to write a book proposal with a colleague. The proposed book is intended help guide aspiring and new academics in the process of academic survival. The volume's title was carefully chosen, because it reflects what we believe is distinctive about what we will convey: *Everything Your Mentor Never Told You: Surviving Academia from Graduate School Through Tenure*. Most academics arrive at their first faculty position having moved to a new state far from classmates, professors, family, and friends. Excited and optimistic, they find themselves overwhelmed with the demands of making a new life in a new place and, in particular, with the workload and social demands of the faculty role. Some flourish but many struggle to lay a foundation that will eventually lead to tenure. And even among those who go on to earn tenure, the journey is often far rockier than it need have been. Junior faculty encounter all sorts of unanticipated pressures, unspoken expectations, and unusual conflicts—the kinds of things for which they were not prepared but that can derail an academic career.

The purpose of this book is to help illuminate these challenges and to provide guidance on how they might be negotiated successfully. My co-author and I have taken up the task of writing this "survival guide" for two reasons. First, it is the kind of volume that we wish were available to us when we initiated our academic careers. We have learned about academic life by the method of trial and error—and sometimes by trial by fire! Second, we are at a stage in our careers where we have had diverse experiences—across disciplines (criminal justice and political science), across six different universities, across many career stages, and across gender—that give us wisdom to share. We trust that our combined experienced—supplemented by focus groups and a survey we will conduct with other faculty—will allow us to write a book that tells fellow faculty "what they really need to know" to enjoy the good and avoid the bad of faculty life.

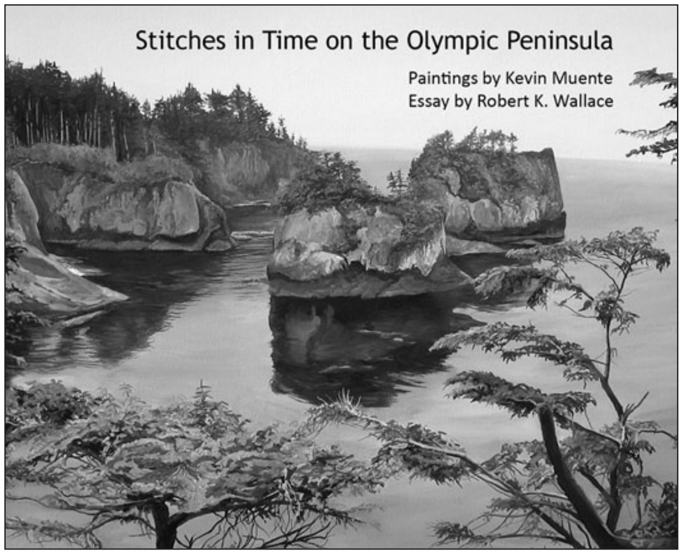
PROJECT GRANT 2009

Kevin Muente, Department of Visual Arts

Robert Wallace, Department of English

A Walk through the Woods in Washington State
A visual and written memoir of Olympic National Park

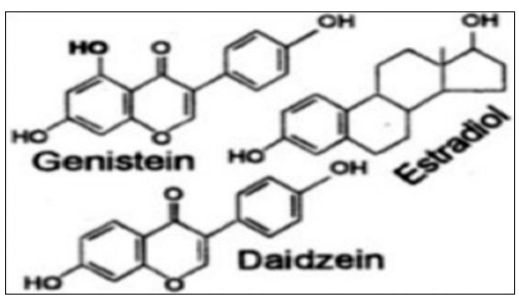
This was a collaboration between Kevin Muente and Bob Wallace. The project included a 63- page catalog entitled "Stitches in Time" consisting of an essay by Bob and paintings by Kevin. This collaboration also led to a unique exhibition that displayed the narrative and 26 paintings in the third floor gallery at Northern. One painting from this series 2nd Beach, Olympic National Park, was selected into the 2009 Paint the Parks 100 competition. In addition, Kevin and Bob gave two campus lectures. Funding is being sought for publication of Bob's manuscript.



PROJECT GRANT 2008-09

Eimear Mullen, Department of Biological Sciences

An Investigation of the Effects of Soy Isoflarones on Cellular Protein Stability with Respect to Cardiovascular Disease and Hypercholesterolemia



The structure of genistein, daidzein and estradiol

Heart disease is the leading killer in humans today. Because of this, new trends in foods have risen such as soy. Soy lowers cholesterol levels, however the components of soy and the mechanisms that cause this effect is a source of controversy. It is our hypothesis that the isoflavone component of soy lowers cholesterol at least in part by inhibiting proteasome activity. In this study proteasome activity was examined by incubating a HepG2 cell protein extract with either genistein or daidzein, a positive control and a fluorescently labeled proteasome target peptide which would demonstrate either the trypsin-like or chymotrypsin-like activity of the proteasome. We found that genistein decreases the trypsin-like activity but increases the chymotrypsin-like activity. Daidzein increases both the trypsin-like and chymotrypsin-like activity of the proteasome. Future studies include: (1) Investigate the effects of daidzein on the trypsin-like activity of the proteasome and (2) Examine the effects of genistein and daidzein on the levels of proteasome target proteins such as Bax and p27 as well as on the levels of ubiquitination.

Ethics in Accounting: Identifying the Missing Controls in Corporate Accounting Scandals and Analyzing the Resulting Rules and Laws Crafted to Prevent Future Abuses

SUMMER FELLOWSHIP 2009

Catherine S. Neal
Department of Accountancy

During the Summer of 2009, I was granted a faculty summer fellowship to support a research and scholarly writing project in which I examine the details of specific ethical and legal breaches that occurred in recent high profile corporate accounting scandals and the law and rule changes that occurred as a result of the scandals. The objective of this research project is to determine whether the new laws and rules are effectively preventing the same or similar types of ethical abuses and legal violations, and whether those laws and rules are sufficient to prevent the same or similar types of legal unethical and illegal behaviors in the future. I am also examining judicial interpretation of the Sarbanes-Oxley Act of 2002 over the seven (7) since the law was enacted. This research originated when I served as an Honors Capstone Mentor for an undergraduate honors student who was writing her honors thesis on "Ethics in Accounting" during the 2008-09 academic year. The research project will result in two scholarly manuscripts entitled Ethics In Accounting: Identifying the Missing Controls in Corporate Accounting Scandals and Analyzing the Resulting Rules and Laws Crafted to Prevent Future Abuses and Seven Years of the Sarbanes-Oxley Act: An Overview of Judicial Interpretation, both of which will be submitted to high quality business law journals.

A Comparison of Special Education Practices and Issues in the U.K. and the U.S.

PROJECT GRANT 2009

Bianca Prather-Jones,
Department of Teacher Education

The major objective for this project was to visit with educators in England and Scotland in order to explore international practices and issues related to educating students with disabilities. I met with faculty members from the University of Edinburgh (Scotland) and the University of Huddersfield (England) to discuss the most common models currently being used in those countries to educate students with disabilities. Practices, issues, and ideas related to preparing teachers to work with students with disabilities were also shared during these meetings. The aim of the project was to participate in a collegial exchange, both learning from and providing information to, faculty members from U.K. teacher preparation programs. As part of my contributions to this exchange, I prepared and executed a paper presentation at the University of Huddersfield on the topic of special education practices in the United States. The audience for this presentation included both faculty members and students in that University's teacher preparation program, and a lively sharing of various ideas and issues related to special education followed my presentation.

In addition to visiting with University faculty and students, I was also able to spend a day in a k-12 school while carrying out this project. This particular school was specifically built for and specialized in educating students with significant disabilities (England utilizes segregated schools for students with disabilities at a higher rate than the U.S.), and included an array of specialized supports, such as mobility equipment and dedicated sensory rooms, that are rarely seen in U.S. schools. While visiting this school I was able to talk with the school director and teachers, observe in several classrooms, and interact with students in the "play yard."

This project led to a significant increase in my understanding of the perceptions, practices, and challenges related to educating students with disabilities in the U.K. It also enabled me to establish international contacts that may prove useful in my future endeavors related to comparative education. I am very grateful for the funds provided by this project grant, as they allowed me to participate in incredible learning experiences that I would not have otherwise been able to. Thank you.

SABBATICAL LEAVE 2008-09

PROJECT GRANT 2008-09

SUMMER FELLOWSHIP 2009

Holly Riffe, Department of Counseling, Social Work and Leadership

Community, Stigma, and Death from AIDS in South Africa and Cambodia

During my sabbatical I focused on two primary goals: (1) Understand the processes surrounding dying from HIV/AIDS related diseases in South Africa and (2) Understand the role and impact upon non-familial health care professionals of caring for persons dying from HIV/AIDS related illnesses.

It had been nearly 6 years since my last research in South Africa focusing on the deaths from HIV/AIDS related illnesses. At that time, many people in the townships were being buried in mass graves due to the high rate of death from AIDS and the collapse of financial systems to pay for funerals. Since the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) funding allowed anti-retroviral medications to be delivered widely, many fewer residents were dying from AIDS-related illnesses. One agency director revealed that "in the past we would have about 10 – 20 people dying each week, but today we have more like 5 – 10 per month."

I attempted to understand the processes/rituals surrounding dying in the South African context. I focused on both tribal ritual and grief issues. Although fewer people are dying of AIDS-related illnesses, there is still much death. Grief seems to permeate every day and every event. In the townships of my research, most families attend at least one funeral every month, but more often every week (most funerals occur on Saturdays to allow for travel by relatives). Many key informants reported that he or she knew little about their tribal rituals until the time of burial when an older relative might step in and change many of the planned services. For example, one man was burying his father according to Vende custom and an uncle appeared just prior to burial demanding that Zulu traditions be followed. Given South Africa's tortured history in the last century, this type of discord is not surprising.

The key informant interviews and focus groups culminated in a more in-depth study of Para-professional caregivers. These caregivers are paid via government stipend of approximately $50 per month to provide basic home health to a wide variety of clientele. This program was started to provide temporary employment to township residents (unemployment rates exceed 20% nationally and well over that rate in the townships). I was able to study a wide variety of caregivers as they proceeded from house to house (or shack to shack) and observe them providing care. This supplemented focus groups and key informant interviews. The resultant articles will add to the slim literature base in this area. In addition, I provided a half-day training on vicarious traumatization for approximately 50 caregivers. This training for caregivers will become an annual event along with a weekly support group run by a South African university colleague.

SABBATICAL LEAVE 2008-09

Patrick Schultheis, Department of Biological Sciences

Manuscript and Grant Preparation in Ion Transport Physiology and Training in Ratiometric Imaging

Dr. Schultheis holding an Atp13a2 knockout mouse developed to study Parkinson's disease

My work involves a specific class of membrane transport proteins called P-type ATPases. They use energy in the form of ATP to transport ions across cell membranes against their concentration gradients. P-type ATPases have been grouped into five subfamilies, termed P1-P5, based on the amino acid sequences that comprise the proteins. My lab recently identified five members of the P5 subfamily in mice, which we designated Atp13a1-Atp13a5. Because the P5-ATPases have been retained over evolutionary time in organisms as diverse as yeast and humans they are likely to carry out important cellular functions and possibly play an important role in human health and disease. As evidence of this, mutations in the gene encoding human Atp13a2 have recently been shown to cause an inherited form of Parkinson's disease. My goal is to carry out a basic characterization of these transport proteins by determining where in the cell they are located and identifying what ion(s) they transport, both of which are critical if we are to develop a detailed understanding of their cellular and physiological functions. A longer term goal is to create genetically engineered mice in which the gene encoding each of the P5-ATPases is eliminated. Such animals are called "knockout mice" and serve as great research models for human disease states.

I have been fortunate to receive extramural funding from the National Institute of General Medical Sciences of NIH and the Kentucky Biomedical Research Infrastructure Network (KY-BRIN) to support my work. In the Spring of 2009 I was granted sabbatical leave to write manuscripts, submit grant renewals, and learn a sophisticated fluorescent imaging technique critical to my research success.

During the Sabbatical I submitted two grants to the National Institutes of Health. The first was to request funds for a Recovery Act Administrative Supplement to extend the funding of my current NIH R15 Award, the goal of which is to biochemically characterize the P5-ATPase transport proteins. This application is still in review. The second application was submitted to the National Institute of General Medical Sciences to support my work involving the behavioral and neuroanatomical characterization of a novel mouse model of Parkinson's disease in which the gene encoding the mouse Atp13a2 gene was disrupted rendering it nonfunctional. Though not officially funded to date, this application received a very favorable review (Impact Score of 20 which equates to the top 5 percentile) and is very likely to be funded. I also submitted one manuscript and a second is in preparation. In addition, I worked with Dr. Paul James, a colleague at the University of Miami in Oxford, Ohio to gain experience using a high-speed, digital fluorescence imaging system that allows us to monitor ion transport in live cells. This technique will likely prove valuable in the future characterization of the P5-ATPase transport proteins. In conclusion, I am very grateful to have received a sabbatical leave and that it already has proven to be of great benefit to my research program.

SABBATICAL LEAVE 2008-09

Lynne A. Smith, Department of Teacher Education

Expanding the Kentucky Reading Project and Reflective Writing in K-3

Kentucky Reading Project

The Kentucky Reading Project is an intense professional development offered to teachers of kindergarten through fifth grades through the state universities. The grant, funded by the Collaborative Center for Literacy Development (CCLD) at the University of Kentucky, offers teachers three hours of graduate credit, free books and materials, and a participant stipend. The teachers must apply, with a reference from their school principals, in teams and be selected to participate. The curriculum of the two-week summer institute focuses on examining their schools' literacy needs and developing specific action plans to improve the literacy of students. Teachers attend four follow-up sessions, are visited by a director and present what they have accomplished at the statewide Share Fair in March.

Because the geography of Kentucky includes many rural areas not located within easy driving distance of a regional university, some teachers are not able to attend Kentucky Reading Project. The purpose of part of my sabbatical was to create an online version of KRP that would be accessible to these teachers. I am currently finishing the curriculum for this course that is to be offered through Blackboard and Wimba at NKU this summer, depending on available funds.

I was also given funds to create a Kentucky Reading Project in Region 8, which is the eastern part of the state. The decision was made to take the Region 8 KRP to Harlan County. This entailed several trips to Harlan, working with the Reading First Coach from that area, and collaborating with a school instructional coach from Lexington who was hired to assist with the project. We were successful in enrolling 18 teachers and the project went so well that funds were provided for a second project during the current academic year in Hazard.

I am currently working on an article detailing the process we went through to make connections in regions with which we were not familiar. In addition, all materials for the online course will be shared with projects throughout the state.

Reflective Writing

The second main area of interest for this sabbatical was to continue working with area teachers as they increase the reflective writing activities of their students. Reflective writing, as defined by the Kentucky Writing Program, requires that students create a written discussion of the manner in which their literacy skills have developed over time. When I talked to teachers about reflective writing, they had two concerns: no time to add anything else to a busy day and frustration with having to add one more thing to lesson plans. They also expressed the desire to find a better way to do this writing and feel like their students were more successful at it.

I used a reflection journal that was a small composition book containing five tabs: authors, experiences, people, things I read, and speaking and listening. One of the journals was given to each student every k-5 class in one school and seventh grade language arts classes in one school. A list of questions was generated for each category. For example, under the experiences tab, students might be asked to reflect on what they could do in second grade that they couldn't do in kindergarten. These questions were either typed on labels that were posted on the appropriate pages or written on the board or overhead for students to copy. Students would write in these journals every week or two for about fifteen minutes, share entries, and discuss their writing. When the students were ready to write a reflective piece about their literacy growth, they had written reflections of what they thought at different times during the year to go to for ideas. In summary, procedure offered a simple procedure that took little class time and little planning time, while at the same time adding structure to reflective writing during the school year and enabling students to more easily write their reflective pieces.

While I am still analyzing the results, the process and results to date have been shared at several conferences including the Kentucky Reading Association, the Kentucky Middle School Association, the Southeast Regional International Reading Association, and the National Council of Teachers of English. In all but one case, one or more of the teachers who piloted the journals and continued to work with them last year have presented with me. I am presenting second and fourth grade results at the National Council of Teachers of English Conference in Philadelphia in November.

Kerry Conrad, the seventh grade teacher from Pendleton County, and I wrote an article for the *Kentucky English Bulletin* that was published in the spring. I plan to write at least one more article as soon as the samples are completely analyzed. I will also share the results with colleagues who teach language arts classes in the college.

Solika La-Sadica

PROJECT GRANT 2008-09

Sharon Vance,
Department of History and Geography

Over the summer of 2008 I was able to do primary source research on a monograph that I am working on about the Moroccan Jewish Saint, Sol Hatchuel (Solika La-Sadica), a young Jewish girl who was martyred in Tangiers and whose story became the subject of numerous texts, many written by European travelers and diplomats, as well as the subject of a painting by the 19th Century French painter, Alfred Dehodencq. As a result of the support I received from NKU I was able to spend a week at Oxford University in the Bodleian Library researching the papers of Edward William Auriol Drummond-Hay (1785-1845), who was the British Consul General in Tangiers, between 1829 and 1845. I also spent a week in Madrid, in the Archivos Históricos Nacional researching the papers of José Rico, the Spanish Vice-Consul during this period. I also spent time in Israel meeting with Dr. Joseph Chetrit to go over two manuscripts in Moroccan Judeo-Arabic. After working on these last semester and over the summer I realized that I needed to consult the notebooks they came from and so I returned to Israel in August and visited the Bar Ilan University Hebrew Manuscript Division and was able to consult the notebooks to verify the place of redaction and the provenance of the manuscripts. I was also able to learn about and obtain copies of published research that others had done on my subject.

SUMMER FELLOWSHIP 2009

Robert K. Wallace, Department of English

Melville Book, Jerusalem Conference, Olympic Narrative

The fellowship for the summer of 2009 allowed me to complete the sections on Rubens and Rembrandt in the book I am writing on Herman Melville's print collection and to present a paper on "Melville's Biblical Prints and Clarel" at an international conference on Melville and the Mediterranean in Jerusalem. The summer fellowship also allowed me to prepare for two local art exhibitions in that opened in August 2009. Chasing the Whale in Northern Kentucky at Gallerie Zaum in Newport featured more that thirty works in diverse media by students and alums of my classes in Melville and the Arts at NKU between 1994 and 2009. Stitches in Time on the Olympia Peninsula at NKU's Third Floor Gallery was a collaborative exhibition with NKU art professor Kevin Muente. My essay "Kevin Muente at Work" in the exhibition catalog addresses both the open-air paintings he made on the Olympic Peninsula in July 2008 and the studio paintings he made after returning home.

Illustration: front cover of invitation for Chasing the Whale in Northern Kentucky

Extended Plan Graph for Handling the Context-Dependency Problem in Human-GIS Communications

SUMMER FELLOWSHIP 2009

Hongmei Wang, Department of Computer Science

Based on the project plan for the summer fellowship, I conducted the following research work in the summer:

I extended a Human Communication Framework (HCF) that I developed before for better understanding of human-GIS communication. The extension was based on characterizing various contextual factors which may influence the meaning of the user's speech request, and human communication strategies which are used to handle the context-dependency problem in human-human communication. I extended the PlanGraph model based on the extended HCF. The extended PlanGraph model can help the GIS to keep track of more types of contextual factors, such as time and causation, in addition to the contextual factors of task, space and human. I applied the extended PlanGraph model to handle the vagueness problem in human-GIS communication, which also involves the context-dependency problem. I wrote the following paper draft based on the result of my summer research funded by the faculty summer fellowship: PlanGraph: An Agent-Based Computational Model for Handling Vagueness in Human-GIS Communication of Spatial Concepts through Natural Language. This paper was submitted to one of international computer science conferences and currently is under review.

Business Intelligence on Healthcare

SABBATICAL LEAVE 2008-09

Xiaoni Zhang, Department of Business Informatics

On my application, I stated, "I will spend my sabbatical researching and writing a teaching case and a journal paper on Business Intelligence on Healthcare." Business Intelligence is the latest technology and holds the promise to improve operations and management for organizations and triggers great interest in teaching and research. During my sabbatical, I focused my main activities on interviews, extensive literature search, listening to webcasts and writing manuscripts. These learning opportunities have given me a better understanding of technology in healthcare.

The purpose of my sabbatical was to produce scholarly papers and write teaching case on Business Intelligence. The teaching cases could be deployed at two of my graduate level classes – MHI 650 (Research Methods in Health Informatics) and MBI 667 (Business Intelligence Using SAP). During my sabbatical, I interviewed physicians, directors in charge of Health Informatics and contacted faculty members in other institutions on Business Intelligence. My interactions with healthcare professionals and faculty members provided me with the learning opportunities and collaborative research opportunities.

My site visits in healthcare organizations offered an enhanced understanding about healthcare operations, technology adoption, workflow, and performance metrics. These visits, my own readings on healthcare literature as well as webcasts on healthcare provided adequate sources for developing the teaching case. I will submit a manuscript on the teaching case to an education journal - *Journal of IS Education* at the end of Feb. 2009 and plan to submit a conference paper to a national conference in my field - *Americas Conference on Information Systems*.

- Zhang, X., Wang, H. and Cata, T. "Teaching Case: Applying Business Intelligence to Healthcare Informatics," under review in the *Journal of IS Education.*

These teaching cases will be deployed at my two graduate level courses: MHI 650 (Research Methods in Health Informatics) and MBI 667 (Business Intelligence Using SAP). Students in MHI 650 (Research Methods in Health Informatics) will use the case to learn healthcare specific analytic research topics. Students in MBI 667 (Business Intelligence Using SAP) can use the case to develop infocubes, dimensions, and attributes pertaining to the case environment.

In addition to the journal paper submissions, I was also involved in Students' Retention Project at SAP Center of Excellence (COE). We reviewed literature on student retention and contacted several universities who have initiatives on student retention. Our next step is to coordinate with other departments at NKU on student retention and compile a list of available data and from which we will perform a gap analysis on what we have done and what needs to be done.

I worked with my chair Ben Martz and colleague Vijay Raghavan to write a conference paper based on COE's Student Retention Project and submitted to Americas Conference of Information Systems/Hawaii International Conference on Information System. The paper was published in Americas Conference of Information Systems (2009). Below shows the reference to the paper.

- Zhang, X., Raghavan, V., and Martz, B. "Investigating IS Student Retention Factors," Americas Conference on Information Systems, San Francisco, August, 6-9, 2009.

My sabbatical will benefit students at NKU through the connections I made with people in the U.S. and China. I am willing to serve as a resource to find, connect, help with faculty, and students exchanges and visits in China.

The scholarly work will enhance NKU's visibility and reputation and the teaching case benefits students learning experience. My professional network will bring opportunities for future collaborative research. Currently, one Chinese visiting scholar is working with me on a research project titled "Virtual Tourism Community in China." We plan to submit a paper based on our collaboration to the largest conference in IS field – Americas Conference on Information Systems in early 2010.

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