At the core of the University of Nebraska at Kearney's growing recognition by *U.S. News and World Report* as a "top 10 Regional Public University in the Midwest" is its commitment to teaching and learning through the scholar-teacher model, where professors bring their intellectual prowess to students in the classrooms, in the studios and laboratories, and as partners with students through graduate and undergraduate research projects.

We hope a glimpse of the work of some of the scholars portrayed in these pages will provide fresh evidence of UNK's contribution, as a university community of scholar-teachers, to the well-being of society within our state, the nation and beyond.

Topics represented here include a broad array of intellectual pursuits including the cover story featuring agriculture economist (and native Ghanian) Dr. Frank Tenkorang, whose timely focus on the impact of U.S. ethanol production on global corn availability is shedding important new light on the fuel-versus-food issue. Political scientist Dr. William Aviles, whose family roots trace to Colombia, has become known for his expertise on politics in Colombia and Latin America. He is especially interested in the role of the military of the region and how it effects developing democracies.

Closer to home, criminal justice expert Dr. Joseph Carlson's study of prison nurseries, especially incarcerated moms, has been noted in such national media as *Newsweek* and *Marie Claire*. Dr. Carlson hopes to promote his findings that demonstrate helping mothers and newborn babies within prison walls can reduce misconduct and recidivism, as well as help protect children from entering a cycle of criminal activity and incarceration.

Dr. Linda Crowe is another professor (communications disorders) whose research into language development of children has been noted nationally. Many of her most recent publications were co-authored with students as a part of UNK's highly respected program of undergraduate student research. Also from the College of Education, early childhood educator Dr. Dawn Molkenkopf has been successful in creating a program to bring online degree and certification programs to preschool teachers across Nebraska, an especially important program for teachers in some of the most remote, rural areas of the state. In all, she has been awarded more than $3 million in federal grants to support her work.

Management professor Dr. Kyle Luthans has emerged as one of a small group of leaders in a new global movement called "psychological capital" (PsyCap) that is changing the way businesses value their employees. He says that PsyCap is a "strength-based approach, emphasizing the positive psychological resources employees possess."

English professor Dr. Marguerite Tassi is writing about Shakespeare, with an unusual twist: women and revenge. Among the provocative questions she addresses: Can there be virtue in vengeance? Offering Cordelia in "King Lear" as an example, Dr. Tassi has discovered that Shakespeare's women "more often than not, met the conditions for virtuous vengeance."

Dr. Darlene Cowles Mitchell offers her creative output as a music composer extraordinary. With more than 150 compositions to her name, 100 of which are published and widely performed, Dr. Mitchell's approach to music is distinctly contemporary—characterized, some will say, by a remarkable ability to use musical instruments and complexly dissonant harmonies in unique and strikingly beautiful ways.

Certainly, the University of Nebraska at Kearney has matured and grown impressively throughout its history. In this magazine, we want to share with you the increased academic value provided students by our professors, including the quality and quantity of faculty scholarship and creative activity, a sampling of which is on display in this, the third annual issue of *New Frontiers*.
At the University of Nebraska at Kearney, we take great pride in a diverse environment that provides faculty and students opportunities to achieve their goals.

Research, scholarship, and creative activity are the foundation of our teaching, providing our students an enhanced university experience that ultimately prepares them to be our future leaders, scientists, educators, health professionals, artists, musicians, and business entrepreneurs.

Conventional thinking suggests that the main reason most faculty members do research and creative activity is to satisfy tenure and promotion requirements. While that may be true for some, clearly, something else motivates many researchers. This third issue of New Frontiers showcases faculty from across the university who are making remarkable discoveries through passionate, creative, and innovative approaches to their work.

Most of us have in some way benefited from research and creative activity without necessarily realizing it (e.g., medical technologies, educational strategies, concerts, business designs). The outcomes of scholarship answer questions, satisfy a need or provide an aesthetic experience. Faculty members who take part in research and creative activity are contributing to the care, treatment, and well-being of countless numbers of people.

Our faculty inspire not only the lives of our students, but also the lives of people across the state, the region and the nation.

Much of the research featured here has been published in leading journals, presented at national and international conferences, and attracted funding from nationally competitive sources. These types of recognitions speak to the credibility of our faculty, and their scholarly and creative work. We are dedicated to supporting our faculty, so they can continue the tradition of scholarship and creative activity. By facilitating research and creative activity, the University of Nebraska at Kearney is promoting innovation and cultivating a spirit of inquiry.

Only a few of our scholars can be highlighted in this publication. There is much to celebrate at UNK! I hope you enjoy this issue of New Frontiers.

KENYA S. TAYLOR, Ed.D.
Dean of Graduate Studies and Research

New Frontiers 2010-2011 is published by the Office of Graduate Studies and Research at the University of Nebraska at Kearney. This publication is designed to highlight research, scholarship, and creative activity in and across disciplines. Any use of trade names in the articles does not imply endorsement by the university. Further, opinions expressed in this publication do not represent the official view of the university.

Articles appearing in New Frontiers may be reprinted provided endorsement by the university of a commercial product is not stated or implied. Please credit the researchers involved and the University of Nebraska at Kearney.

OFFICE OF GRADUATE STUDIES AND RESEARCH
Dr. Kenya Taylor, Dean
DIRECTOR SPONSORED PROGRAMS
Dr. John Falconer
MANAGING EDITOR
Glenis Nagel
CREATIVE/ART DIRECTOR
Randy Maitley
CONTRIBUTING EDITORS
Jan Tether-Thompson, Jon Potter

PHOTOGRAPHY CREDITS
Melenbacker Photography, iStock Photography
All photographs are property of UNK, University Relations and were taken exclusively for use in University of Nebraska at Kearney publications.

Postmaster
Please send address changes to New Frontiers Magazine
935 West 25th Street
1000 Founders Hall
University of Nebraska at Kearney
Kearney, Nebraska 68849
Or you may call: 308.865.8300
email: kllemen@unk.edu

University of Nebraska at Kearney
Kearney, Nebraska 68849

The University of Nebraska is an affirmative action/equal opportunity institution. Individuals needing accommodation under ADA should contact the ADA Coordinator at UNK. 308.865.8855. Designed and produced by UNK Creative Services.
Dr. William Avilés first traveled to Colombia as a child to visit his mother's relatives. She had immigrated to the United States in the mid-1960s.

Neither Avilés nor his mother could have imagined on those family vacations that he would one day be a UNK associate professor of political science known for his research and expertise on politics in Colombia and throughout Latin America.

"I'm trying to understand the role of the military," Avilés said. "How it contributes, or how it detracts, from a democracy." And in December of 2010, both books are written for graduate students and faculty members at U.S. and Latin American colleges and universities.

Avilés said that he hopes some of those students will carry the information with them into careers as diplomats, politicians or activists. Closer to home, Avilés said that he hopes his work will contribute to recent debates surrounding U.S. and Colombia trade relations with the region. Countries such as Colombia, which is seeking a free trade agreement with the United States, represent potentially profitable markets for Nebraska exports. Understanding the quality and strength of its democracy is central to whether such a free trade agreement will be implement-
ed given the priority that some in Congress give to human rights.

Avilés had an early interest in current events. "I got into a habit in high school of reading the newspaper with my folks," he said. "Looking back at that time, I could see that my interest was getting piqued in what was going on in the world. '60 Minutes' was always on TV each Sunday night."

As a child, he grew up in a Miami suburb. His mother was a high school graduate who worked in retail sales, and his father, who earned a general equivalency diploma in the 1980s, worked many different jobs. His father was born in Queens, N.Y., into a family whose ancestors immigrated from Puerto Rico in the early 20th century. Originally, his mother saw him as a potential lawyer, but later concluded that he was a natural teacher.

"It was a constant mantra from my folks, 'You will be going to college,'" Avilés said, noting that his younger brother will be earning a doctorate in sociology within the next year or two. Avilés earned a bachelor of arts degree from Florida International University in 1993, and went on to earn his master's and doctorate degrees from the University of California at Riverside. After one year as a visiting assistant professor at Vanderbilt University, he joined the UNK faculty in August of 2002.

His interest in Latin American politics was narrowed in graduate school when he chose a dissertation topic that focused on civilian-military relations in Colombia. Since then, he has expanded his research to include the Andean region and variations in their democratic governments. Avilés said there was a shift in all of Latin America in the 1970s and 1980s away from authoritarian governments in which the military played a key role. "One country after another was adopting a democratic type system," he said. "Some are more democratic than others, and none is exactly the same."

In the 1990s, Colombia was really standing out as an exception... in a negative way," he said, explaining that while other countries were resolving their internal conflicts, Amnesty International still was sounding alarms about violence, armed guerrilla groups, drug trafficking and assassinations of political candidates in Colombia.

Yet unlike other countries in the region, Colombia avoided a military government. He said one case made for the emergence of armed guerilla groups was that Colombia's democracy was not open enough.

"There are different types of weak democracies" in Latin America today, Avilés said. "Where they fall short varies. Some are defined as electoral democracies. For example, Colombians elect their leaders and have a relatively free press."

In Venezuela there are elections with multiple parties and opposition leaders serving in government. However, Avilés said, President Hugo Chavez uses his power and strong rhetoric to vilify the opposition as traitors. According to Avilés, a major concern about the military in Venezuela is that many retirees have moved into government positions that have nothing to do with military expertise.

In contrast, Colombia has checks and balances that exist and are real, plus multiple political parties and a military that maintains order. "Where Colombia falls short is in the area of civil liberties. For example, it's one of the world's most dangerous places to be a unionist," he said. Colombia is also known for the "false positive scandal" in which soldiers are accused of killing innocent citizens and dressing them as guerillas to earn benefits such as time off or pay bonuses. While Avilés was recently in Colombia with a student group, he and the group met with 15 women, all of whom said that they had male relatives.
The problem of income distribution, which contributes to political violence and major infrastructure issues throughout the country.

Colombia’s efforts to reduce violence have produced some positive results, including more tourism and foreign investment.

In all, he has made three trips to Colombia as a researcher and teacher. Most recently, he led a UNK group there in May (2010) during the week leading up to the first round of presidential elections. In June, former Defense Minister Juan Manuel Santos won with 69 percent of the vote. Santos oversaw several counterinsurgency campaigns under Uribe’s administration.

UNK travelers visited polling places on election day. They watched protests and a political rally, and heard presentations by U.S. Embassy representatives and Colombian government officials, university professors, and leaders in social issues such as union membership, health and the drug trade.

In 1991, Colombia was really standing out as an exception... in a negative way

Colombia’s industries include textiles and clothing, leather products, processed foods and beverages, paper and paper products, chemicals and petrochemicals, cement, construction, iron and steel products, and metalworking. Colombia has considerable mineral and energy resources, especially coal and natural gas reserves. Colombia is the largest producer of coal in Latin America, and also mines gold, silver and ferronickel. Main exports are: petroleum, coffee, coal, gold, bananas, cut flowers, chemicals, emeralds, cotton products, sugar and livestock.
As for that ravenous tiger, Tamora,
No funeral rite, nor man in mourning weed,
No mournful bell shall ring her burial,
But throw her forth to beasts and birds to prey:
Her life was beastly and devoid of pity,
And being dead, let birds on her take pity.

—William Shakespeare, “Titus Andronicus”

In this closing speech from Shakespeare’s “Titus Andronicus,” Lucius Andronicus, the new Roman emperor, reflects the way audiences and scholars typically view Tamora, the Goth queen, who has spent the majority of the play pursuing her vendetta against the Andronici family. As UNK English professor Dr. Marguerite Tassi points out, however, Lucius’ harsh judgment tells only part of the story of a woman’s revenge.

As Tassi sees it, Tamara’s drive for revenge stems not from innate savagery or evil, but rather from a queen’s feeling of dishonor and a mother’s sense of injustice. Her son has been sacrificially slaughtered by the Roman general, Titus Andronicus. Out of her bereavement, out of her sense of injury arise maternal fury and vengefulness.

Revenge, as Tassi explains in her forthcoming book “Women and Revenge in Shakespeare: Gender, Genre, and Ethics” (Susquehanna University Press), is the concern of women as much as it is that of men, only women tend to practice a more varied art and nuanced ethics of revenge than men do. According to Tassi, their revenge reflects their social circumstances as women, their desire to transcend helplessness and, at times, their love of justice.

In her book, Tassi addresses a number of provocative questions: Can there be a virtue in vengeance? Can revenge do ethical work? Can revenge be the obligation of women? She argues that the often marginalized stories of women’s revenge constitute a long-standing subversive element in Western literature, and that this less visible tradition comes into focus when critical attention is given to women’s preoccupations with honor and shame, justice and revenge, moral outrage and ethical response. According to Tassi, critics tend to categorize Shakespeare’s women as victims, helpless tragic figures, evil doers and witty heroines, often ignoring the subtle ways women speak and act to make their ethical claims.

“My book serves as a vindication for women,” Tassi said, “in that it explores ways in which Shakespeare’s female characters seek to vindicate themselves, and their female kin and friends.” By looking at female characters’ concerns for the integrity of women, family, community and the larger cultures to which they belong, she demonstrates how “often, revenge is the consequence of those concerns.”

Set for publication in early 2011, “Women and Revenge in Shakespeare” will be Tassi’s second book. Her first, “The Scandal of Images: Iconoclasm, Eroticism, and Painting in Early Modern English Drama,” came out in 2005. Her articles have appeared in numerous refereed journals, and she is a veteran reviewer of scholarly books and theater productions. Her most recent reviews have been of major Shakespeare productions, including Rupert Goold’s “Macbeth” (with Patrick Stewart in the title role) at New York City’s Lyceum Theatre in 2008.

Her latest research has been fueled by an understanding that humans have definite, but dueling, ideas about revenge. Particularly in Western civilization and literature, revenge is “officially” seen as a barbaric instinct that can only bring ruin or more violence. While it is true that revenge can be dangerous, and avenging characters often pay a price for their version of justice, Tassi asserts that a more balanced, ethical perspective needs to be applied to revenge literature.

From Queen Hildeburh in “Beowulf” to Uma Thurman’s character in “Kill Bill,” Western literature and film represent characters—often women—who take revenge against those “who’ve done them wrong.” Often, these women take revenge on men who have hurt their families. What these characters demonstrate, according to Tassi, is that the revenge ethic is deeply rooted within the human psyche and connected to our innate sense of justice.
In reaching her conclusions, Tassi looked at both Shakespeare's comedies and tragedies, and used a blend of analytical approaches and methods. "With Shakespeare, you can't escape doing as much linguistic analysis as possible—language is revelatory and deepens our understanding of dramatic character," she said, adding that while readers may find the outlook disquieting, they will also be compelled to ask themselves whether there are productive, and ethically viable, ways to take revenge.

"With Shakespeare, you can't escape doing as much linguistic analysis as possible—language is revelatory and deepens our understanding of dramatic character."
Results of the 10-year evaluation were published in spring of 2009 in an article titled "Prison Nurseries: A Pathway to Crime-Free Futures" in Corrections Compendium. The article has brought national attention to the concept of prisons nurseries, and to Carlson. He was quoted and his research was featured in articles for Newsweek, Readers Digest of Canada and Marie Claire. In addition, prison officials from as far away as New Zealand have contacted him for information, and a publisher interested in having Carlson write a book about the study is currently reviewing his articles.

Carlson said he had no bias for or against the program going in, partly because so little information about prison nurseries existed. While New York's Bedford Hills and Taconic correctional facilities have had nurseries since 1902, Carlson said very little data has been published about them. What do exist are short-term studies, which compare the participants' recidivism to the rate for all women inmates, rather than to a similar population—other inmates also having babies in prison. Nebraska's study compared the nursery program participants' recidivism rate to that of other incarcerated mothers who were forced to give up their babies.

Carlson began by collecting data on 30 inmates who had babies in the three years before the program was implemented. As women entered the program, Carlson collected similar data on them. He tracked subjects' prison records for reports of misconduct or re-incarceration, and administered surveys to measure participants' perceptions of the nursery program.

The study found a decrease in recidivism and misconduct, at a very inexpensive cost to the state, and that's influenced other states.

Information was collected through December 2007. While the initial collection work was done at the prison, Carlson said prison staff and officials, including Alley, and nursery program director Renee Uldrich, supplied data via phone or e-mail.

From the first group of 30 mothers, 50 percent violated parole or committed new crimes. In contrast, only 16.8 percent of the first 65 women who went through the nursery program had such violations. While the recidivism decline may be the study's most important finding, Carlson said data shows the program also had a positive effect on participants' conduct while in prison. From 1994 to 1996, the number of misconduct reports fell 13 percent for women who had been in the general population and were placed into the nursery program.

After 1996, women were placed directly into the nursery living area after they were approved, so numbers could not be compared over all 10 years. In 2004, however, Carlson noted there were no misconduct reports for the eight women in the nursery program, while 62 percent of the general population received reports.

Carlson's study also noted that Nebraska achieved these results at a minimal cost. The grant that established the program was for $24,800, which was supplemented by the Nebraska Legislature. Alley said the current budget for the parenting program—which also includes costs associated with day and overnight visits by older children and a Fatherhood Initiative for male inmates—is $102,000.

"The study found a decrease in recidivism and misconduct, at a very inexpensive cost to the state, and that's influenced other states," Carlson said, adding that prisons everywhere are looking for answers to similar issues.

With the evaluation complete, Carlson said he and another researcher, Dr. Julie Campbell, who is an assistant professor in
the UNK criminal justice department, have begun a new project. They are contacting prison officials around the country to find out what needs of women prisoners they expect will have to be met over the next 10 years. At the same time, Carlson said, they are looking at states that do not have nursery programs, to determine why those states do not have similar programs.

"Our initial findings are that state officials aren't aware and are under the false impression the program would be more costly than it is," he said.

Prisons are dealing with an increasing number of women who have just had children, or who give birth during their incarceration. Alley said when she started her job 20 years ago, there were about 70 inmates. In the spring of 2010 there were 278, and, at times, the population has exceeded the maximum of 300. Officials are looking for ways to keep those women from repeat offenses and to avoid having their children return later, as inmates.

Between 1994 and 2008, according to Carlson's article, nine other states instituted nursery programs. Eight of those states—California, Illinois, Indiana, Massachusetts, New York, Ohio, Washington and West Virginia—allow inmates to keep their babies with them for 12 to 24 months. In South Dakota, babies may stay with their mothers for only 30 days.

Alley said since Carlson's findings were released, officials from several other states have called or visited the Nebraska facility. "Most states want something about this size, and they want to see how this runs," she said.

Though Carlson's study demonstrated clear benefits from the nursery program, he said there is more data he would like to have. For example, whether participants committed new crimes in other states and whether they retained primary care of their children. There is also no way to follow up on the children who started their lives in the prison nursery.

Given the mothers' response to the program, however, Carlson said there is good reason to believe the nursery experience can help them and their children after their release from prison. Ninety-five percent of the inmates said they felt they had a stronger mother-child bond because of the program and that the parenting classes had helped them.

Jane, who was in the nursery program for 17 months, said the day before her release she was grateful to have had the parenting classes to help her care for son Nate. Though she had three other children before being sentenced on drug charges, she said the classes gave her a lot of new ideas and tools to use this time around, especially when it came to discipline.
fuel vs food

How does a city boy from West Africa's Ghana find his calling as an agricultural economist in the heart of Nebraska farm country? For Dr. Frank Tenkorang, UNK assistant professor of economics, the path included side trips to rural and city classrooms in Ghana, plus universities in Wyoming and Indiana.

“When I came to the United States, my goal was to find a place like UNK, a small place to teach classes and do my little research,” Tenkorang said modestly from his third-floor office in the West Center. That “little research” has involved compiling and computer modeling data from other studies to identify trends in Nebraska, the Midwest Corn Belt and the world.

Regional topics have included the use of new farming technologies, factors that influence ethanol plant locations and production levels, and the role of price forecasts and farm policies on farmers’ planting decisions. Research currently in progress aims to identify the impact of U.S. ethanol production on global corn availability, also defined as the fuel-versus-food issue.

The debate centers on the influence of a U.S. renewable fuels standard in boosting corn production and sales for ethanol processing. As grain and food prices skyrocketed in the summer of 2008, the corn-based ethanol industry suddenly went from a leading role in advancing the goal of a home-grown alternative-fuel future to the villain triggering worldwide food shortages.

Ethanol officials defended their industry by saying that many factors contributed to food shortages and high prices, including high production and transportation costs linked to non-ethanol energy sources. They explained that ethanol comes from field corn, which provides only about 10 percent of the corn used directly for food. Most field corn is used for fuel production and for livestock feed.

As a consultant for the United Nations Food Agricultural Organization in 2004 and 2007, Tenkorang’s work is helping forecast how much fertilizer would be needed to meet the growing population's world food needs as projected for 2015 and 2030.

The United Nations estimates that today’s world population of more than 6.85 billion people will grow to 8.9 billion by 2050. The food demand linked to that growth raises many natural resource issues, including pollution, deforestation, and limits on tillable land, water and fertilizers.

Finding solutions to these and other issues is often accomplished through collaborative research, such as the work Tenkorang does with other UNK faculty on information technology, truck safety and international trade.

Tenkorang’s research partner for many studies is Dr. Deborah Bridges, another UNK economics professor. Tenkorang said they are about 25 percent finished with a project to create economic models to study the variables within ethanol-food-fuel issues.

“We’re looking at the global impacts, because if the United States uses most of its corn for ethanol, it can lead to higher grain prices in the world,” Tenkorang said. “Studies done in the United States showed it did have an impact (on 2008 food supplies and prices), but not as much as the world was claiming. There were other factors.”

“I hope to get the study done by next summer (2011),” he said. “I have a friend from Ghana who is also interested in this.”

Tenkorang grew up in a large family in Ghana’s capital city of Accra, where his father owned a hotel and his mother was a secretary for a government agency. As a boy, he wanted to be what his parents wanted him to be. For Ghanaian parents of boys, that was a medical doctor.

“All the guys had that mentality of going to medical school,” Tenkorang said. “We had only two medical schools in Ghana, so it was very competitive.” First, high school graduates had to do a year of public service. He chose teaching, and initially was assigned to a very remote area. “There was no electricity and no good water,” he said. “Nobody wanted to go there. The students
went into the classroom,' he said. "My interest was that a bachelor's degree was not enough." The professors he doing work for various professors on the university campus.

Tenkorang completed his year back in the city teaching third-grade girls who already were excited about someday going to college. The enthusiasm rubbed off on him, and he enrolled in the University of Ghana College of Agriculture that offered majors in plant science, animal science, economics and engineering.

"The first three years, you are just floating (taking courses in all areas) and then you specialize," Tenkorang said. "I chose the economics side." He explained that Ghanaian students must prepare for college in high school by taking the appropriate preparatory classes for the medical college or the agriculture college.

So why choose economics? "It was the most prestigious major (at the agriculture college) as far as getting a job. It was very competitive," Tenkorang said, adding that he had toyed with the idea of majoring in animal science, because one of his uncles was a veterinarian.

Like Nebraska, the backbone of Ghana's economy is agriculture. Instead of corn, cocoa is the main cash crop, and Ghana is the second largest cocoa exporter in the world. The country also is a young democracy, Tenkorang said. Ghana became independent of British rule in 1957, but was not using new satellite-linked technologies for yield monitors, and precision applications of fertilizer and other crop chemicals.

"The technology was there, but the application by farmers was very low. We wondered why farmers weren't using the technology," Tenkorang said. The answer was the cost per acre. As more farmers used the new management tools, the cost of the equipment went down.

Tenkorang now teaches UNK microeconomics and macroeconomics courses to 200-level students, and agricultural marketing and economics of the agricultural sector to 300-level students. He said he uses some examples from his research to teach economic concepts to his students, especially those in the agribusiness classes. Even more of the data he has gathered will be used next spring, when he plans to teach a class specifically about the food-versus-fuel issues.

Much of his research has focused on collecting information from other studies, modeling the data and testing variables. A graduate assistant has helped him at times with the data collection.

One study looked at specific factors influencing ethanol plant location and production capacity, including corn availability, water, cattle and access to a major highway. The study, which involved 122 similar plants throughout the United States, found that corn production was the only statistically significant factor.

"I became interested in this because of the United Nations fertilizer demand study," Tenkorang said. "I came here and realized Nebraska was one of the areas I could look at. Do we have enough corn? Why are they (ethanol plants) all in the Midwest?"

Answers to one question always lead to new questions for researchers, he said. For ethanol, he said, another issue is how to get the fuel from Midwest plants to refineries, and then to East and West Coast states with the highest populations and greatest demand for fuels.

"We cannot use the existing gas pipeline, because ethanol is corrosive," Tenkorang explained. "So how do we distribute it?"

He said that whenever a researcher does a study with information from other studies, the goal is to take the research to the next step. For example, he is concerned about what new technologies in ethanol production, including the use of alternative crops, would mean to corn farmers.

Tenkorang also has looked at how to make a better, simpler model to accurately forecast crop prices. It would allow farmers to make better production decisions, plan financial activities, and develop marketing plans and risk-reduction strategies. The problem, he and Bridges found, is that much of the key data required to predict prices that was relied on by earlier studies is not available to agricultural producers when they need to make planting decisions.

The two UNK researchers also have compiled data about how changes in U.S. farm policies, starting with the 1996 Farm Bill's new freedoms to plant various crops, have changed land use decisions. Their October 2008 paper was titled "Multi-Crop Accumulation Response to the 1996 Farm Act and Beyond." Most of Tenkorang's work thus far has been secondary research. He said there are many issues that can be studied in that way, but he hopes to use Nebraska's fertile farm country to do his own data collection in the future.

"What I have in mind is to use primary data, go down to farms and primary businesses," he said. He is already mentoring a student, who is exploring the impact the current recession has had on small businesses in Kearney.

"We want to know who overcame it, and what they did," Tenkorang said.

The student, an economics major, was in the UNK Undergraduate Research Fellow program. He gathered literature and background information on the topic and has reapplied to the program to continue working with Tenkorang on the research. Tenkorang said that he hopes surveys of business owners can be done this fall and that he can have some data assembled by next May.

And the former city boy from Ghana, whose roots have become firmly planted in Nebraska, will find his research work tied even tighter to Nebraska and Nebraskans.■
Heads bent together over the thin, colorful book, a boy and his clinician read. He fidgets, bobbing a leg or hiding inside the T-shirt he keeps pulling over his close-cropped blond head.

"Why do you think he's on his tippy toes?" asks the clinician, pointing to the page where Little Hamster is trying to mow the lawn for his mother. And then, when she has the boy's attention again, they turn the page. Little Hamster is setting the table. "What do you think will happen next?"

The clinician, a graduate student, is working with the Kearney area third grader in the UNK Speech, Language and Hearing Clinic. From her office in the same building, Dr. Linda Crowe watches the session and nods, pleased.

"That's what good readers do, anticipate the story," she said, explaining the communicative reading strategies (CRS) her student is using to help the boy understand not just the words on the page, but how they come together to make meaning.

It is a philosophy Crowe advocates in the classroom, in the clinic, and through her current research that shows such strategies could help children overcome literacy problems more quickly.

"My passion, and what I enjoy the most, is literacy," she said, adding that the recent national emphasis on improving education dovetails well with her current research on communicative research strategies.

"Educators have started trying to find the 'magic key' to literacy," she said, and want to know what effect different interventions have on students who are struggling. What she has found is that by using communicative reading strategies, educators may be able to more quickly identify what kind of help children need as they are learning to read.

The current trend in education, she said, is to use a system called Responsiveness-to-Intervention to identify and address learning problems early in a child's academic career, especially in reading. What this means is that students receive interventions delivered in the classroom for several weeks, and then they are screened to assess progress in reading. Those who are not progressing quickly enough are given a higher level of assistance, and the process repeats for several more weeks. Those who still do not progress, who are "resistant to the intervention," are then referred for comprehensive evaluations and further assistance.

"Some of the research I've been doing suggests we can identify early those who would be resisters to those interventions using communicative reading strategies," Crowe said. "That would mean students who need the most help could get it more quickly, without waiting weeks or months for screening assessment of intervention effectiveness.

In a recent presentation at the annual conference of the American Speech, Language and Hearing Association, Crowe presented findings from a study of 16 school-age children, all of whom were struggling readers. They were assigned to two different interventions—Group 1 used communicative reading strategies, and Group 2 used a more typical skill-based reading approach.

Students went through initial sessions with clinicians giving them different kinds of prompts to help them as they read. These sessions were meant to judge their beginning skill level in decoding words and reading comprehension. After 15 one-hour sessions of reading interventions, clinicians measured their progress.

The key finding, Crowe said, was how accurately progress could be predicted for the Group 1 students. At their initial testing, clinicians used communicative reading strategies, noted any
immediate changes in decoding and comprehension, and used those as a basis for predicting how the students would respond to the sessions. Clinicians accurately predicted the decoding change in five of the eight Group 1 students and comprehension change in seven of the eight students. The findings need further and larger studies, Crowe said, but they are an indicator of how effective communicative reading strategies can be.

Crowe came to academia after teaching in elementary schools, including stints at two rural Nebraska schools. At one, she taught kindergarten through eighth grade. She said the experience made her realize how much some students struggle. The experience led her back to school for more training.

"There were a couple of kids in the secondary that needed intervention I couldn't give," she said. Her training in speech pathology, then, taught her how valuable a strong diagnostic session with a child can be. That is a lesson she puts to use now with the adult and school-age clients who come to the UNK Speech, Language and Hearing Clinic. The clinic is in high demand from clients with all kinds of communication disorders, including those struggling with literacy. Crowe does initial sessions with clients, then observes sessions between clients and clinicians.

The key element in using a communicative reading strategies approach is that it addresses all parts of reading at once, Crowe said, adding that rather than a simple activity, reading is actually a set of skills. Readers have to think about the phonology of language, the syntax, the morphology, the semantics and the pragmatics.

"Some kids can do certain pieces, such as phonology, so they focus only on sounding out words but ignore meaning, and sometimes you get kids who can understand it, but they can't decode for anything," she said. "My philosophy is that reading is pulling all those pieces together?" Teachers can help students make those connections using communicative reading strategies as the clinician did for her third-grade client. Their sessions, made up of three parts, began with a first read of the day's material with verbal prompts intended to help him relate to the situations he was seeing on the page. A second time through, she offered fewer comments but responded to the boy's questions in ways designed to help him connect the story to something meaningful.

"Are they going to have dinner?" the boy asked, as he read through Little Hamster trying to set the table for his mom.

"Dinner, or supper? Which do you have at your house?" the student clinician replied.

Later, when the boy was stuck on a word, she did not ask him to sound it out phonetically but, instead, to make a judgment about what the word had to be, based on the meaning of the sentence.

"So his stomach is speaking. He's really, really ... " Hungry.

"Are they going to have dinner?" the boy asked, as he read "Dinner, or supper? Which do you have at your house?"

"Hungry," the student clinician replied.

"Are they going to have dinner?" the boy asked, as he read "Dinner, or supper? Which do you have at your house?"

"Hungry," the student clinician replied.

Lately, the boy wrote about what he had read, and finally, they did an activity that used an element from the book. In this case, they prepared an apples-and-peanut-butter snack for each other, the way Little Hamster had tried to make food for his mother.

Throughout the session, Crowe explained, her student had been focused on building the boy's understanding, not just on what sounds the words made, or what they meant, but on how they were being used to tell a story and convey ideas.

"He needs to see how words connect meaning," she said, and so far the sessions have been fruitful. Referred by an area school, the boy started the semester with pre-primary reading skills. At the end, he was reading second- and third-grade texts, with some assistance.
As Kyle Luthans noted: "With the rising recognition of human resources as a competitive advantage in today's global economy, human capital and, more recently, social capital are being touted in both theory, research and practice. To date, however, positive psychological capital (PsyCap) has been virtually ignored by both business academics and practitioners. 'Who I am' and 'what I can become' is every bit as important as 'what I know' and 'who I know.'"

Luthans further added that "PsyCap is a strength-based approach, emphasizing the positive psychological resources employees possess instead of focusing on the dysfunctional. To be included in PsyCap, the psychological resource must not only be positive, but also have valid measurement, be open to development, and have an impact on desirable work attitudes and performance. The positive psychological resources that meet these criteria are hope, efficacy/confidence, resilience and optimism or our HERO acronym."

"Although each of these four HERO capacities is associated with famous positive psychologists, we have combined them into PsyCap, which our research has shown is greater than any one of them by itself."

"Importantly, PsyCap is malleable—it can be developed by short training programs," he said. "In other words, it can be managed for more effective work performance."

Why is PsyCap being touted?

"Research has shown that managers or leaders with high levels of PsyCap not only have the ability to bounce back after difficult times themselves, but they also can create a contagion effect that can spread positivity throughout an organization," he said, adding that in today's difficult economic times, such qualities are critical to an organization being able to bounce back and move ahead. Traditionally, businesses have measured their strength, or competitive edge, in the marketplace by measuring their economic capital—finances, plant, equipment, patents, technology, data, etc.—all tangible assets. However, if you ask Luthans what the source of competitive advantage is in today's marketplace, he will tell you that, "It's the people and their psychological capital—the HERO within them."

One of the most successful entrepreneurs of recent times gets it. "Bill Gates is known for his comment that the most important assets in his company walk out the door every night," Luthans said. "In other words, they can be managed for more effective work performance."

As many as 200 businesses, which are divided into subgroups of 10-20, are involved in this unique information exchange network.

"We're looking at their positive outcomes, their management practices and the relationships they build," he said. "It's important that our research is of use to practicing managers." Luthans said.

When we do research, we ask what the workplace applications are. We also ask what the pedagogical contributions are. What are some ways we can bring our research to improve what we are doing in the classroom for our students?"

In today's hyper-competitive environment, we can no longer afford to wait for the fars to take for research findings like PsyCap to reach the textbooks for our students or the literature read by the practicing managers we serve," he concluded. "Our aim is to provide the most current, evidence-based management practice guidelines so that our students and the business community have competitive advantage in today's global economy."
Seven years ago, Brenda Bigley became the head teacher at the Head Start preschool in Madison, Neb.

About the same time, federal requirements for Head Start teachers changed, and she realized that her associate's degree would not keep her qualified for long. She called Dr. Dawn Mollenkopf, an associate professor in the UNK Department of Teacher Education, looking for a way to earn her bachelor's degree online. Mollenkopf had turned her away, because at that time, most of the classes Bigley needed were only offered on campus, during the day. With a roughly two-hour drive to Kearney from her home or school, there was no way to make the program work for her.

"That was disappointing," Bigley said. "I wasn't sure what I was going to do."

Today, more and more preschool teachers are facing the same challenges, as the national push to improve education creates higher standards for teacher qualification and professional development. In the last six years, Mollenkopf has helped meet those teachers' needs through programs and studies funded through four major federal grants totaling more than $3 million.

The first, a U.S. Department of Education grant for more than $1.7 million awarded in 2004, was aimed directly at Head Start teachers such as Bigley. Mollenkopf collaborated with Nebraska's two-and-four-year colleges to create articulation agreements, increase the number of course offerings and make courses more accessible. She said some colleges added courses, while others changed when or how courses were offered. The result, she said, is that it is now easier for preschool teachers all across Nebraska to find the classes they need, online or at times they can attend, and they can put together credits from many colleges to round out their degrees.

The grant, along with a state T.E.A.C.H. scholarship, also paid the tuition and other expenses for more than 150 Head Start teachers to go back to school. The teachers were from high-need school districts, determined by the poverty level in the district or the percentage of students who were part of the federal school lunch program. Some were in urban areas, such as Omaha, while others were in very rural areas. The latter included the Winnebago Native American Head Start program.

"Fewer than 50 percent of all preschool teachers had bachelor's degrees." Addressing the challenges of rural teachers has been a priority for Mollenkopf since she came to UNK in 2003. Only a year earlier, the university had begun reorganizing and streamlining its endorsements to make distance less of a problem for rural students. As Mollenkopf outlined in a 2009 article for The Rural Educator, the UNK Department of Teacher Education first combined two endorsements to create the early childhood unified endorsement. That got a lot of interest from rural teachers and superintendents, which pushed the university to go further.

"The department was challenged to create a professional development certification track that would be accessible to rural teachers, while allowing them to use their current teaching placement and other locations in their towns to meet field experience and practicum requirements," she wrote. Mollenkopf met that challenge by putting more classes online and creating more flexible assignments, with greater options for how students could complete them. She also created more options for field-based methods courses, such as online mentoring through Blackboard journals. Accessibility and flexibility, Mollenkopf said, have been key components in her effort to get preschool teachers the training they want and need.

Mollenkopf's focus on early childhood education began when she taught elementary children in rural Oregon. She saw children coming into her elementary school classroom with a wide range of abilities, learning styles and disabilities. She thought, until I understand a wider range of kids, I'm not going to be able to make any difference," she said, which sparked a dual interest in preschool and special education. At that time, she said, most people viewed those as completely separate areas of specialty. However, she saw a connection, and in 2002, she earned a doctorate from the University of Kansas in special education policy integration with a secondary emphasis in early childhood education.

In recent years, more educators have acknowledged, and responded to, the overlapping interests of early childhood and special education, which come together in the preschool environment, according to Mollenkopf. There, teachers get their first chance to find and meet the wide range of educational needs students bring with them into school.

"One of the biggest things I've picked up is how to be developmentally appropriate," she said, "not just for the age group, but tailoring lessons for individual students." That's especially important in a Head Start classroom, she said, where students come from such diverse backgrounds.

"Classroom techniques and teaching strategies are only part of what teachers get from higher degrees and professional development," Mollenkopf wrote. Classroom techniques and teaching strategies are only part of what teachers get from higher degrees and professional development, Mollenkopf said. Those who participated in the..."
"I was able to call her back and tell her that everything you need is now online."

With these, Mollenkopf and the Nebraska Indian Community College will help 10 Native American students complete their bachelor’s degree by delivering more upper-division UNK courses through alternate methods and providing them mentors. Another need Mollenkopf identified through the original grant was for a complete online bachelor’s program in the early childhood unified endorsement at UNK. That will be accomplished by the fall of 2010, with help from a $95,000 grant.

"I had my fingers crossed" that this time UNK would come through, Bigley said.

Mollenkopf smiles as she recalls hearing Bigley’s voice mail. She remembered her, and how it had felt to turn away someone who wanted an education.

"I was able to call her back and tell her that everything you need is now online," Mollenkopf said.

In another year, Bigley will have her teaching certificate that, at least for me, it is necessary to have an initial musical idea which generates some sketching. Then, I have to have an experience of the ‘whole’; what Susan Langer calls the ‘commanding form’. Sometimes, the time span between the initial idea and the commanding form can be months, or even years.

"In the case of this piece, the commanding form occurred to me in a dream. I clearly saw and heard the entire design of the work, although not in minute detail;" she said. Those details would be worked out over the weeks ahead.

"Usually, the last piece of the puzzle for a new composition is in the form of a need—a commission, a performer asks for a piece or something like that.”

This time, what is usually the last piece of the puzzle was already in place. Franziska Nabb, a UNK flute instructor, had asked Mitchell to create a piece for the newly formed Trans-Nebraska Players—a five-member instrumental group comprised of music faculty from UNK, the University of Nebraska—
American Women Composers-Midwest. She later rewrote it for violin and guitar, and Duo 46 performed the piece in Greece and on their tour of the U.S., including a performance at the Kennedy Center. The pair recorded Images for Guitar Plus Records. "And we invited them to UNK, and they gave a wonderful concert here," Mitchell said.

Two of her favorite compositions—Journey to the Yellow Springs (1984) and Visions (1997)—were written for her husband Bob, who plays tuba. Visions is a concerto for tuba and concert band. The title and subtitles of the movements are based on the writings of Hildegard of Bingen (1089-1179), one of the early known female authors and composers.

"I wrote this work (Visions) for Bob when he completed his master’s degree at Florida State University. The FSU Graduate Winds performed the piece, with Bob as the soloist, so I have a wonderful recording of it. "The recording is so good," she added, "that I have been able to use it to apply to various contests." The work won Mitchell first prize in the American Pen Women National Composition Competition in 1998.

Mitchell has received numerous awards, grants and fellowships, including Illinois Arts Council Grants, Artist Fellowships, Meet the Composer grants and a Florida Arts Council Artist Fellowship. In 2005, she received the Nebraska Arts Council’s Distinguished Artist award; in 2006, the Composer’s Commission for the Nebraska Music Teachers Association; and in 2007, a commission from the Lincoln-based Third Chair Chamber Players for Music of Remembrance.

Mitchell, who teaches composition and organ, as well as coordinates the music theory curriculum as a professor in the UNK Department of Music, has served on the faculty of DePaul University, chaired the music chairmanship and composition department at the American Conservatory of Music in Chicago, and taught for the Chicago City Colleges European Division in Belgium, Moraine Valley Community College in Palos Hills, Ill., and Chattanooga Valley Community College in Phenix City, Ala.

Mitchell holds a B.M. from De Paul University; the M.M. from Northwestern University, where she won the Faricy Award for Creative Composition; and a Ph.D. in music composition from the University of Chicago, where she studied with Ralph Shapey and Pulitzer Prize winning composer Shulamit Ran. Ran was only the second woman to receive the Pulitzer Prize in Music.

Among the early influences on her work was her doctoral work with Ralph Shapey, whom Mitchell said, "...was very structured. He helped give structure to my work," and a group she founded while she was in Chicago, called the Marcel Duchamp Memorial Players. Music performed by the group has been described as free improvisation, experimental, contemporary and avant-garde.

When she joined the UNK faculty, Mitchell's passion for new music led her to establish the New Music Festival, and 300 entries were received the first year. The festival, which she describes as "a lot of work," but also "exciting and rewarding," has become an annual event that draws submissions by composers from across the nation. On occasion, international composers have also submitted work.

Submissions are reviewed by a five-member committee of UNK music department faculty, which Mitchell chairs. From among the submissions, works are selected to be performed in a series of three festival concerts, UNK musicians, along with area guest artists, perform the works featured in the festival.

While she hosts a New Music Festival for new and emerging composers, her own compositions are regularly selected for performance in prestigious, competitive festivals across the nation and around the world.

A piece written for flute, alto saxophone and piano, Jubilus, was performed at the World Saxophone Congress in Libljana, Slovenia. In 2004, Watery Moon, a work for alto flute and vibraphone, was a jury-selected finalist in

"I like to work with text," she said. "It gives you the 'commanding form.' Text can do that for you. When I get an idea, the music seems to flow."
the Rarescale Alto Flute Composition Contest and performed at the Royal College of Music in London, England.

Also in 2004, O Ver Angelis, written for soprano, clarinet and piano, was jury selected for performance at the American Composers Alliance New Music Festival in New York, N.Y. The work was also selected for performance at the Hildreth Festival of Women in the Arts at the University of California-Stanislaus in Turlock, Calif. Just last year (2009), Metaxu, written for mezzo-soprano, cello and piano, was jury selected for performance at the American Composers Alliance New Music Festival in New York, N.Y.

She draws on her deep faith for much of her work. Among her works in progress are Epiphaneia, for symphony orchestra; A Soul's Journey, which is an orchestrated version of her chamber opera; and The Gospel of Mary Magdalene, an oratorio.

Mitchell, who began playing piano at the age of eight, said: "I started writing almost as soon as I began playing—shuffling dots around on a page." In her composition classes, she tells her students to pick five notes and then begin to move the notes around. "After a few days, they pick 10 combinations they like. I tell them to organize them—consonance and dissonance. Organize the flow of tension. Some books call it the 'emotive curve.'" And the music begins to take form.

"Write them until you dream them," she instructs her students.

"In February, 2010, I had just completed the third song in my song cycle, Song of the Virgin, when I realized that my music has become part of...the New Spiritual Music;" Mitchell recently wrote in her memoirs. "My style of composition seems to be evolving again, as characteristics of the New Spiritual Music are appearing, perhaps from my unconscious, and are being integrated into my previous style. These characteristics include repetitiveness, especially in the use of patterns, a post-modern approach to tonality, and an intuitive and emotional sensibility."

"I'd like to be remembered as someone always interested in expanding consciousness—someone who sees thresholds that need to be crossed. I'd also like to be remembered as someone whose door was always open to students, helping students solve problems."
The new Bruner Hall of Science Complex opened in October, the result of a multi-million dollar, two-phased project to enlarge the original building, improve its infrastructure and modernize the science classrooms and laboratories. This new showcase facility, the only one of its kind between Lincoln and Denver, was designed for the highest quality science research and instruction. The complex also houses a 60-seat space-age planetarium that was funded in part by a NASA grant.