TO BOLDLY GROW

pg. 14
Over the last year, UNC Greensboro celebrated its 125th anniversary. The occasion has given us time to remember our past — but also to envision our future. I was recently reminded of what a gift such moments are during UNCG’s 2018 Conference on African American and African Diasporic Culture and Experience, where a presenter introduced me to the concept of Sankofa.

The term, from the Akan people of Ghana, means “to go back and fetch it.” It is typically heard as part of a proverb that translates to “It is not wrong to go back for what you have forgotten or lost.”

The symbol for Sankofa is a bird looking backward, with an egg in its mouth representing the future. The proverbs has been particularly important to peoples of the African Diaspora, for whom the meaning has evolved to “remembering the past, to protect the future.”

As UNCG looks forward, I find myself thinking that Sankofa holds important lessons for us as scholars. The concept weaves through much of our work, as is evidenced in this latest issue of UNCG Research Magazine.

The rings of ancient alpine larch trace the rise of global warming. Our responses to a 1906 earthquake and 2005 hurricanes offer insight into how we will face coming natural disasters. A previous generation’s exposure to BPA dictates a medaka fish’s reproductive health. A queer network of exchange in the early 1900s illustrated how women have lifted and continue to lift one another up in the face of overwhelming odds.

In each story, the same lesson: to build a better future, we must understand our past.

To make our next leap in space, we must go back and comprehend basic mechanisms of plant biology, evolved long before we took our first steps out of the primordial ooze. We have to play the long game, as we have in UNCG’s quarter-century effort to teach kids life skills and build stronger communities through sport — refining our models as we go, in response to lessons learned.

Of course, no project better embodies Sankofa than the Digital Library of American Slavery, where researchers and students are working to bring some of the 4 million enslaved to life through much of our work, as is evidenced in this latest issue of UNCG Research Magazine. This digital archive is for descendants of the oppressed and the oppressors. Because we cannot move forward together without facing our past.

As UNCG takes its next giant steps into the future, may we be like the Sankofa bird. Boldly moving forward, yet always conscious of our past and the hard-won wisdom it contains.

Assembly Required

A home. A community center. A playground. How can designers make sure their creations truly meet people’s needs? The Center for Community-Engaged Design places community partners at the core of the creative process.

The Long Game

Sports can teach children important skills and values. But for optimal impact, you need an intentional, educational approach. A 25-year effort at UNC Greensboro equips kids for success.
IT BEGAN WITH PAPER – LOTS OF PAPER

The seed for the project took root decades ago, with the ground-breaking work of Dr. Loren Schweninger, professor emeritus of history. It's making a difference to 60,000 users each month, including African American genealogists, academic researchers, and best-selling authors.

Stolen Names

One undeniable vestige of American slavery is that 4 million people were held in bondage. Historians and the public can search for names of those held in bondage. Thanks to the effort, UNCG now houses one of the largest databases of slave records.

African American genealogists, academic researchers, and best-selling authors.

For Cox, the quest for more names continues. His recently applied for a three-year grant to gather slave data from 18 North Carolina newspapers. For him — as it was for Schweninger — uncovering the past is a labor of love.

“Taking care of this — and expanding this database — is something I take very seriously,” he says. “I feel I have an obligation to the people named in the documents.”

Dr. Schweninger (center) and his two assistant editors Nicole Mazzaj and Margarita Rosas-Hawes, a UNCG history graduate, are working under Dr. Tolbert (right) to further the library’s reach, work with more students, and speak with students.

WORK IN PROGRESS

Dr. Schweninger (center) and his two assistant editors Nicole Mazzaj and Margarita Rosas-Hawes, a UNCG history graduate, are working under Dr. Tolbert (right) to further the library’s reach, work with more students, and speak with students.

Now, Cox (left) is partnering with universities such as Cornell and Emory to further the library’s reach, while UNCG history students working under Dr. Tolbert (right) continue to expand the runaway slave ad collection. Some students have been inspired to begin their own research, with topics ranging from an exploration of the experience of female runaways to a look at the constructs of African American masculinity.
Plastics in the gene pool

For more than a decade, parents have worried about the dangers of disease due to first-person exposure to Bisphenol A, or BPA, an industrial chemical used in plastics and epoxy since the 1960s. But few know that the impacts of exposure can travel onward to future generations as well. And scientists don’t fully understand why or how it happens.

Those are the answers Dr. Ramji Bhandari, assistant professor of biology, is trying to unearth. By using a novel research model, the medaka fish, he’s investigating BPA’s transgenerational effect — how parental exposure alone can cause chemical changes to DNA in offspring and in third and fourth generations and how those changes lead to adult-onset reproductive problems.

According to studies in rats and mice, he says, those reproductive problems include prostate cancer, infertility, polycystic ovary syndrome, prediabetes, endometrial cancer, and ovarian cancer.

Knowing the impact is paramount because plastic is everywhere. Recent studies, Bhandari says, show measurable concentrations of BPA in all human blood and urine samples.

Understanding its effects can unlock how to trust future generations for diseases.

In a developing embryo, chemical signals on DNA tell a cell how to specialize, including the cells that produce sperm and eggs. BPA can alter these signals in developing cells, Bhandari says, and these modifications can be retained throughout our lives. This is called an epigenetic change. “When sperm and egg pass parental information to offspring, these chemical modifications can go with them and cause health problems later in children’s lives.”

With National Institutes of Health funding, Bhandari’s team tracks the unique epigenetic changes BPA makes on sperm and egg-producing cells and whether they are passed on to offspring.

The researchers continue tracking these markers across three generations, looking at the epigenome at various stages of medaka life, from embryo to adulthood. By comparing the epigenetic history of third-generation fish that develop reproductive problems in adulthood to those that do not, they hope to identify which changes are contributing to reproductive disease. A major goal, Bhandari says, is identifying epigenetic markers that point to whether third- or fourth-generation offspring will develop particular conditions in the future. “Not many human studies have focused on epigenetic biomarkers for past exposure and current disease, so we’re hoping to build a foundation to dive deep into this topic.”

The next steps will include looking for the same epigenetic markers in mice, and eventually humans.

One day, he hopes the results may even provide insights into disease prevention and personalized medicine.

“[This work is going to be used as the basis for us going forward],” Bhandari says. “It’s a foundation to look at what things to consider when we analyze the effects of exposure to BPA and other chemicals.”

By Whitney J. Palmer  •  Photography and composite by Mike Dickens  •  Learn more at https://go.uncg.edu/bhandari

EXHIBITIONPHOTO Knapp directs the Carolina Tree-Ring Science Laboratory at UNCG.

“Many scientists suspect this decrease in Arctic sea ice is highly unusual,” he says. “However, creating a proxy record would allow us to really put these conditions into context.”

By Alyssa Bedrosian  •  Portrait photography by Martin W. Kane  
Learn more at https://go.uncg.edu/knapp

With National Institutes of Health funding, Bhandari’s team tracks the unique epigenetic changes BPA makes on sperm and egg-producing cells and whether they are passed on to offspring. The researchers continue tracking these markers across three generations, looking at the epigenome at various stages of medaka life, from embryo to adulthood. By comparing the epigenetic history of third-generation fish that develop reproductive problems in adulthood to those that do not, they hope to identify which changes are contributing to reproductive disease. A major goal, Bhandari says, is identifying epigenetic markers that point to whether third- or fourth-generation offspring will develop particular conditions in the future. “Not many human studies have focused on epigenetic biomarkers for past exposure and current disease, so we’re hoping to build a foundation to dive deep into this topic.”

The next steps will include looking for the same epigenetic markers in mice, and eventually humans. One day, he hopes the results may even provide insights into disease prevention and personalized medicine.

“This work is going to be used as the basis for us going forward,” Bhandari says. “It’s a foundation to look at what things to consider when we analyze the effects of exposure to BPA and other chemicals.”

By Whitney J. Palmer  •  Photography and composite by Mike Dickens  •  Learn more at https://go.uncg.edu/bhandari

EXHIBITIONPHOTO Knapp directs the Carolina Tree-Ring Science Laboratory at UNCG.

“Many scientists suspect this decrease in Arctic sea ice is highly unusual,” he says. “However, creating a proxy record would allow us to really put these conditions into context.”

By Alyssa Bedrosian  •  Portrait photography by Martin W. Kane  
Learn more at https://go.uncg.edu/knapp

With National Institutes of Health funding, Bhandari’s team tracks the unique epigenetic changes BPA makes on sperm and egg-producing cells and whether they are passed on to offspring. The researchers continue tracking these markers across three generations, looking at the epigenome at various stages of medaka life, from embryo to adulthood. By comparing the epigenetic history of third-generation fish that develop reproductive problems in adulthood to those that do not, they hope to identify which changes are contributing to reproductive disease. A major goal, Bhandari says, is identifying epigenetic markers that point to whether third- or fourth-generation offspring will develop particular conditions in the future. “Not many human studies have focused on epigenetic biomarkers for past exposure and current disease, so we’re hoping to build a foundation to dive deep into this topic.”

The next steps will include looking for the same epigenetic markers in mice, and eventually humans. One day, he hopes the results may even provide insights into disease prevention and personalized medicine.

“This work is going to be used as the basis for us going forward,” Bhandari says. “It’s a foundation to look at what things to consider when we analyze the effects of exposure to BPA and other chemicals.”

By Whitney J. Palmer  •  Photography and composite by Mike Dickens  •  Learn more at https://go.uncg.edu/bhandari

EXHIBITIONPHOTO Knapp directs the Carolina Tree-Ring Science Laboratory at UNCG.
Dr. Claudia Cabello Hutt often compares her current research project to a Netflix series. “It’s full of drama, romance, and world travel. Eight countries, three languages, and six main characters. The associate professor of Spanish is tracing transnational relationships among female artists, writers, and patrons of the arts who lived between the 1920s and late 1940s. She’s focused on queer women — those who rebelled against norms of sexuality, reproduction, and economic dependence — from Latin America, Spain, and the United States, and the networks they built.

Many of these women were expelled from their families or social groups because of their choices. As a result, they built “queer networks of exchange” — groups that, until now, have never been studied. “These anti-institutional spaces have emotional, intellectual, sexual, and economic functions,” Cabello Hutt says. “My goal is to theorize how these queer networks function and how they impact the cultural field.”

In doing so, she’s bringing to light the works and lives of women who have helped shape cultural history — putting them on the map figuratively and literally. The work will ultimately culminate in a book, but she’s also creating a public, digital map tracing people, places, and jobs and lodging.

Nómadas” is the title of the book she’s revisited the letters she had flagged and began a transdisciplinary, transnational project involving hundreds of unclaimed letters, press clippings, photos, ship records, and interviews with descendants.

The research will serve as a resource for scholars in the fields of cultural sociology, art history, literature, and gender studies. It will advance the study of networks, and it will unearth stories of women who shaped literature and art — especially those who worked “behind the scenes.”

“When you achieve something of importance, we never achieve it alone. We’re always working with others,” she says. “Often, the people who are not named are women and minorities. I’m especially interested in these individuals — those who enable the work. We need to talk more about them.”

Chilean Maestra

When Maria Gonzalez, board chair of FaithAction International House, attended the 2017 performance of “Nómadas” at UNC Greensboro, she witnessed a dramatic change in the audience from before the opening scene to after the final curtain.

“She’s focused on queer women — those who rebelled against norms of sexuality, reproduction, and economic dependence — from Latin America, Spain, and the United States, and the networks they built.

When Maria Gonzalez, board chair of FaithAction International House, attended the 2017 performance of “Nómadas” at UNC Greensboro, she witnessed a dramatic change in the audience from before the opening scene to after the final curtain.

“Some people were like, “I don’t speak Spanish. What if I don’t understand what they’re saying?” she says. “After, everybody was like, “This was amazing, and they didn’t even speak!”’

That kind of reaction is why Rachel Briley went to extraordinary lengths to bring “Nómadas” to Greensboro. The associate professor of theatre first saw the play at the 2017 Santiago a Mill International Festival in Chile, which she attended as a delegate of the U.S. Theatre Communications Group.

I fell madly in love with this play,” says Briley, who is head of UNCG’s MFA program in Theatre for Youth and artistic director of the North Carolina Theatre for Young People. “Nómadas” is Spanish for “The Nomads,” and the dialogue-free play shows people entering and leaving each other’s lives. It is, by turns, heartwrenching and funny, Briley says, combining physical movement with fanciful objects and large-scale puppets.

Chileans vs. Chileans

For Briley, bringing international theater for young people to the U.S. is about more than entertainment. It’s a way to advance the field. “The cultural construction of the child in North America is so vastly different from other parts of the world,” Briley says. “In many places, childhood is respected in a different way — the art created for young people elevates the entire human condition because it honors the child. We can do this here too.”

It’s about exile, loss, love, and relationships,” Briley says. “It’s about what we gain when we go places, what we lose when we leave.”

Briley has already begun work on bringing La Llave Maestra back to the United States, and she says she is incredibly interested in these individuals — those who enable the work. We need to talk more about them.”

By Alyssa Badman • Photography by Martin W. Kane • Learn more at https://go.uncg.edu/cabello
**THE WORLD IS YOUR CLASSROOM**

It was an uncommon scene in a small classroom in Randolph County: Four headmasters from rural China seated with a group of eager middle-school students, discussing education policy and Southern barbecue.

These Chinese educators, and 14 of their counterparts, spent eight days reflecting with school leaders in some of North Carolina’s most rural counties.

Dr. Ye He, associate professor in UNC Greensboro’s Department of Teacher Education and Higher Education, helmed the visit. “To prepare global-ready students and lead global-ready schools, our headmasters need to be engaged in international and local conversations,” Dr. He says.

Her mission as a teacher educator is to engage teachers at the local and international level. She emphasizes strengths-based, language, and culture-centered teaching.

He’s headmasters project is funded by the Jack Ma Foundation, an organization created by the executive chairman of the world’s largest retailer, Chinese e-commerce company Alibaba Group.

The foundation chose UNCG as its international partner because of the university’s successes in working with rural educators, including the recent Principal Preparation for Excellence and Equity in Rural Schools initiative led by the School of Education’s Dr. Kimberly Kaplan-Hevisit. With $1.8 million from the NC Alliance for School Leadership Development, the initiative is helping 11 North Carolina school districts that are struggling to find and keep effective principals in high-needs schools.

Through the headmasters project, the Jack Ma Foundation aims to enhance management of schools and programming in rural China by broadening headmasters’ scope of knowledge. At UNCG, the goal is to provide North Carolina rural principals and teachers with opportunities for global engagement.

“Depending on the resources you have, students may never have the opportunity to really go to China,” Dr. He says. “But this type of program makes it more mobile – you don’t have to go to China to interact with a Chinese principal.”

Dr. He (image right) hopes that UNCG’s partnership with the Jack Ma Foundation will lead to long-term engagement. Thus far, they have seen a large increase in participants’ willingness to take risks. Participants said they felt comfortable sharing thoughts and ideas, despite any language barriers, and expressed interest in continuing professional development.

“We have found so far that generally the principals are very satisfied with our preparation and our program, and their experiences here,” Dr. He says. “Overall there is an increase in all aspects of knowledge – in terms of language, history, cultural customs, and the education system of the U.S.”

Tingting Huang, project manager for Jack Ma’s Rural Headmasters Initiative, says the visit exceeded expectations.

“What we have learned here can be directly used to guide how we’re going to work on school improvement plans. We hope that in the future there is more collaboration between the foundation and UNCG, and I believe that will happen.”

By Elizabeth L. Harrison • Photography By Mike Dickens • Learn more at https://go.uncg.edu/TeacherEducation

**A GLOBAL, LOCAL EDUCATION**

In the United States, the English Learner population constitutes 9.1 percent of the K-12 student population. Yet English as a Second Language (ESL) and bilingual education teachers make up just 2 percent of K-12 teachers, according to the National Center for Education. Dr. He says some estimates predict we will need to increase the ESL and bilingual education teaching force by 34 percent.

“Instead of us trying to help them understand English,” says Dr. He, “we have to think about how they can bring their own strengths to the challenge.

The project uses a community-centered approach and aims to engage teacher educators, teacher candidates, families, and community partners. Over five years, He and her colleagues are collecting data to assess the collaboration’s success. Thus far, they have seen a large increase in participants’ willingness to take risks. Participants said they felt comfortable sharing thoughts and ideas, despite any language barriers, and expressed interest in continuing professional development.

“Everything we have learned here can be directly used to guide how we’re going to work on school improvement plans. We hope that in the future there is more collaboration between the foundation and UNCG, and I believe that will happen.”

By Elizabeth L. Harrison • Photography By Mike Dickens • Learn more at https://go.uncg.edu/TeacherEducation

Dr. He, in conjunction with Dr. Kristine Lundgren in the Department of Communication Sciences and Disorders, also recently completed a U.S. Department of Education-funded project that took 12 N.C. educators abroad for an intercultural program in China. The educators spent four weeks in China, observing K-16 classes, partnering with Chinese teachers, and more. Upon their return, participants designed curriculum activities based on their experiences for their students.

**activities for families.**

The project is already making progress, with planning team meetings and strong participation by the N.C. Department of Public Instruction and school districts.

“It’s ‘glocal’ engagement,” says He. “The participants and language may be international, but the activity and impact are local.

Dr. He sees bilingual education impact as far-reaching.

“Learning another language empowers you to communicate and expand your collaboration with others.”

Students who are prepared to be globally aware, she says, will understand how to influence the world.
Dr. Sat Gupta is a professor of statistics. With more than 125 journal articles, the Senior Research Excellence Award winner is both an accomplished theoretical researcher and statistical consultant, applying his expertise broadly and collaborating with researchers in disciplines as diverse as biology, education, nutrition, anthropology, economics, public health, psychology, and medicine.

Gupta, who is the founding editor of the Journal of Statistical Theory and Practice, has received funding from agencies such as the National Science Foundation, National Institute of Health, Mathematical Association of America, and Robert Wood Johnson Foundation. Last year, he was named a Fellow of the American Statistical Association, the highest professional recognition in his field.

A BREAKTHROUGH FOR GREATER ACCURACY

“The biggest impact I’ve had would be the introduction of optional RRT models. That, I suppose, will be my legacy. The term RRT means ‘randomized response technique.’ In this technique, in a survey question, you have respondents give you a randomized response, or a scrambled response, rather than a straightforward response. Why would you do that? Well, the survey question could be so personal that if you ask the respondent to give you a correct, emphatic response face-to-face, they may refuse to answer as which is bad enough or worse still, they may give you a socially acceptable lie. Think: ‘Have you ever cheated on taxes?’ My breakthrough work on this appeared in the Journal of Statistical Planning and Inference in 2002. It established optional RRT, where survey participants have an additional choice of providing an accurate, non-scrambled response if they don’t find the question embarrassing.”

REAL-WORLD APPLICATIONS

“I enjoy collaborating. For example, I did a study with nurse researchers at Cone Health that won the Association of periOperative Registered Nurses Journal Writers Contest award in 2017. That study was about patients who develop bedsores after surgery. Another recent one was with the School of Nursing, looking at the negative impact of presenteeism on patient care and the economy. Now we all know what absenteeism is. You are absent from work. But presenteeism is: you are present at work, but you’re not really working. Maybe you’re in pain or experiencing depression. Nurses who are suffering with depression or pain often end up making mistakes. Baseline cost estimates indicate the increased falls and medication errors caused by presenteeism cost $13,346 per North Carolina registered nurse and just under $1 billion for the United States each year.

“That joy in collaborating extends to my work with graduate and undergraduate students. Undergraduates don’t have to do research, or motivating them to do that work is particularly satisfying. My undergraduates have published RRT papers about stimulant use among college students, STD prevalence, and more. Many have gone on to graduate work, both here with me and at other outstanding programs across the country. One of the most rewarding things is seeing these students progress in life.”

ESTIMATING SENSITIVE HUMAN BEHAVIORS

“The biggest impact I’ve had would be the introduction of optional RRT models. That, I suppose, will be my legacy. The term RRT means ‘randomized response technique.’ In this technique, in a survey question, you have respondents give you a randomized response, or a scrambled response, rather than a straightforward response. Why would you do that? Well, the survey question could be so personal that if you ask the respondent to give you a correct, emphatic response face-to-face, they may refuse to answer as which is bad enough or worse still, they may give you a socially acceptable lie. Think: ‘Have you ever cheated on taxes?’ My breakthrough work on this appeared in the Journal of Statistical Planning and Inference in 2002. It established optional RRT, where survey participants have an additional choice of providing an accurate, non-scrambled response if they don’t find the question embarrassing.”

HELPING PEOPLE IN A REAL WAY

“We did a study with nurse researchers at Cone Health that won the Association of periOperative Registered Nurses Journal Writers Contest award in 2017. That study was about patients who develop bedsores after surgery. Another recent one was with the School of Nursing, looking at the negative impact of presenteeism on patient care and the economy. Now we all know what absenteeism is. You are absent from work. But presenteeism is: you are present at work, but you’re not really working. Maybe you’re in pain or experiencing depression. Nurses who are suffering with depression or pain often end up making mistakes. Baseline cost estimates indicate the increased falls and medication errors caused by presenteeism cost $13,346 per North Carolina registered nurse and just under $1 billion for the United States each year.

“That joy in collaborating extends to my work with graduate and undergraduate students. Undergraduates don’t have to do research, or motivating them to do that work is particularly satisfying. My undergraduates have published RRT papers about stimulant use among college students, STD prevalence, and more. Many have gone on to graduate work, both here with me and at other outstanding programs across the country. One of the most rewarding things is seeing these students progress in life.”

“I also enjoy consulting. In one case, I represented a biotech company whose product was rejected by the FDA. We convinced the FDA that the approach they used to test compliance of certain diagnostics devices needed modification.”

BROAD IMPACT

“I’m a statistician. Although my core research at this point is in the branch of statistics called survey sampling, I do non-survey work also — teaching, consulting, and working with researchers in many other disciplines. In recent years, I’ve appeared in many expert cases on behalf of the North Carolina Division of Medical Assistance. In those cases, I basically explain to judge why the sampling approach the State is using is reasonable and based on proper statistical techniques.”

“With each research project, I try to understand the underlying story as much as possible. For example, with the bedsores study, those nurse researchers are better educated now as to what can lead to a problem, and they can take better action. In another study, we tried to figure out how to reduce the use of narcotics after cataract delivery at Cone Health. We learned that mothers who breastfed their babies felt less need for narcotics compared to those who did not breastfeed. It’s called skin-to-skin therapy. This was a very recent study, but the fact that it has concrete implications is very satisfying. One of my graduate students was part of that study. She won the best paper award at a conference in India for the work, and she presented it at a conference in Boston. From a research point of view, these are exciting things. But when you can understand the underlying story, you feel even more excited, because this research has a direct impact on people’s lives.”

“With each research project, I try to understand the underlying story as much as possible. For example, with the bedsores study, those nurse researchers are better educated now as to what can lead to a problem, and they can take better action. In another study, we tried to figure out how to reduce the use of narcotics after cataract delivery at Cone Health. We learned that mothers who breastfed their babies felt less need for narcotics compared to those who did not breastfeed. It’s called skin-to-skin therapy. This was a very recent study, but the fact that it has concrete implications is very satisfying. One of my graduate students was part of that study. She won the best paper award at a conference in India for the work, and she presented it at a conference in Boston. From a research point of view, these are exciting things. But when you can understand the underlying story, you feel even more excited, because this research has a direct impact on people’s lives.”

‘randomized response technique.’ In this technique, a survey question, you have respondents give you a randomized response, or a scrambled response, rather than a straightforward response. Why would you do that? Well, the survey question could be so personal that if you ask the respondent to give you a correct, emphatic response face-to-face, they may refuse to answer as which is bad enough or worse still, they may give you a socially acceptable lie. Think: ‘Have you ever cheated on taxes?’ My breakthrough work on this appeared in the Journal of Statistical Planning and Inference in 2002. It established optional RRT, where survey participants have an additional choice of providing an accurate, non-scrambled response if they don’t find the question embarrassing.”

“I also enjoy consulting. In one case, I represented a biotech company whose product was rejected by the FDA. We convinced the FDA the approach they used to test compliance of certain diagnostics devices needed modification.”

“With each research project, I try to understand the underlying story as much as possible. For example, with the bedsores study, those nurse researchers are better educated now as to what can lead to a problem, and they can take better action. In another study, we tried to figure out how to reduce the use of narcotics after cataract delivery at Cone Health. We learned that mothers who breastfed their babies felt less need for narcotics compared to those who did not breastfeed. It’s called skin-to-skin therapy. This was a very recent study, but the fact that it has concrete implications is very satisfying. One of my graduate students was part of that study. She won the best paper award at a conference in India for the work, and she presented it at a conference in Boston. From a research point of view, these are exciting things. But when you can understand the underlying story, you feel even more excited, because this research has a direct impact on people’s lives.”
Reyes' research with Dr. Jamie Dickens, assistant professor of teacher education, is anxious to return to her alma mater to teach second grade when she graduates in May. She's especially eager to help those in her classroom who are learning English. That’s because she’s observed that attitudes and approaches in teaching English language learners, orELLs, have changed little since she was a student.

Although she was U.S.-born, her English language isn't English. Reyes observed Morales' classes and interviewed students who spoke numerous Indigenous languages, in addition to Spanish and English. “Oaxaca is among the most linguistically diverse areas in Mexico, and speakers of Indigenous languages remain largely stigmatized,” she explains. “I conducted the interviews in Spanish, and I felt as though because we shared a common language, the students were more comfortable speaking with me.”

Students discussed their use of different languages in and out of the classroom and how that helped them learn English. Using Indigenous languages, they said, helped them with English pronunciation when they were phenotypically similar. It also helped when Morales used Spanish and English to clarify certain concepts.

“Mr. Morales’ multilingual approaches — rooted in honoring local knowledge traditionally excluded from the classroom — impact teaching and assessment in his class every day,” says Reyes. “They bolster the understanding that learning isn’t just about receiving information.”

Reyes' willingness to share her research with her colleagues has impressed Schissel so much, she asked Reyes to co-author a manuscript, now under review. Since then, they’ve begun another paper and presented at three conferences.

Gray has conducted research at the Water Resources Research Institute at the University of North Carolina at Chapel Hill, where his work on microbial functions in estuaries and rivers convinced him of the importance of water quality. The project’s findings could be crucial, not only for determining the health of water environments but also in demonstrating just how widespread antibiotic pollution is throughout the Piedmont.

As Gray explains, if humans are exposed to antibiotics through drinking water, that can have adverse effects. One is that those exposed may become resistant to the antibiotic, rendering it ineffective in treating diseases and infections.

“While a master’s student at The Citadel, Gray researched aquatic estuarine areas, green products, and microplastics — tiny plastic pieces that can threaten aquatic life. His lab’s research, shared through town meetings, even led to the banning of plastic bags by several South Carolina towns and beaches,” Gray says.

Improper disposal of these products is what leads to their appearance in our water, and Gray has observed that instructions about responsible antibiotic disposal are not widely available. He has been working to remedy that problem by sharing information at local community meetings, public schools, universities, outreach groups, and conferences such as the Society for Freshwater Science and the Society of Environmental Toxicology and Chemistry. He hopes his research will influence both individual behavior and land use decisions.

“Now, we do play a role in our environment’s health,” he says. “And there are steps we can take to protect it from antibiotic pollution.”

By Susan Kirby-Smith • Photography by Mike Dickens • Learn more at https://biology.uncg.edu

Water, water everywhere

A common language

Martha Reyes, undergraduate researcher

Martha Reyes can’t help but feel a special connection to students whose first language isn’t English.

Reyes, whose family is from El Salvador, spoke Spanish at home. Although she was U.S.-born, her English grammar wasn’t perfect. So, her Charlotte elementary school teachers recommended her for English as a Second Language, or ESL. The message was clear: English only. The thought was that English comprehension improves by discouraging the first language. When a student who only spoke Spanish joined Reyes' class, her teachers relied on her as interpreter. Only then was Spanish allowed.

Reyes, who came to UNCG for its School of Education, is anxious to return to her alma mater to teach second grade when she graduates in May. She’s especially eager to help those in her classroom who are learning English. That’s because she’s observed that attitudes and approaches in teaching English language learners, or ESOLs, have changed little since she was a child. Even as student populations become increasingly diverse, most teachers are still at a loss in helping ESOLs.

Reyes’ research with Dr. Jamie Schissel, assistant professor of teacher education, may help change that. As a former ESL teacher, Schissel has observed how traditional assessment practices can hinder learning and has focused much of her research on the integration of multilingual approaches into instruction and assessment, particularly for language classes. “Making use of learners’ multilingual resources holistically,” she has found, “is beneficial for language learning.”

Reyes first worked with Schissel on a project about integrating multilingualism into teacher education. Her analytical skills impressed Schissel so much, she asked Reyes to co-author a manuscript, now under review. Since then, they’ve begun another paper and presented at three conferences.

Last fall they traveled to Mexico, to examine multilingual approaches to classroom language assessments at the Universidad Autónoma Benito Juárez de Oaxaca. Reyes took part in an ongoing collaborative project with Oaxaca English instructor Julio Morales and his students.

Reyes observed Morales’ classes and interviewed students who spoke numerous Indigenous languages, in addition to Spanish and English. “Oaxaca is among the most linguistically diverse areas in Mexico, but speakers of Indigenous languages remain largely stigmatized,” she explains. “I conducted the interviews in Spanish, and I felt as though because we shared a common language, the students were more comfortable speaking with me.”

Students discussed their use of different languages in and out of the classroom and how that helped them learn English. Using Indigenous languages, they said, helped them with English pronunciation when they were phenotypically similar. It also helped when Morales used Spanish and English to clarify certain concepts.

“Mr. Morales’ multilingual approaches — rooted in honoring local knowledge traditionally excluded from the classroom — impact teaching and assessment in his class every day,” says Reyes. “They bolster the understanding that learning isn’t just about receiving information.”

Reyes’ research with Dr. Jamie Dickens, assistant professor of teacher education, may help change that. As a former ESL teacher, Schissel has observed how traditional assessment practices can hinder learning and has focused much of her research on the integration of multilingual approaches into instruction and assessment, particularly for language classes. “Making use of learners’ multilingual resources holistically,” she has found, “is beneficial for language learning.”

Reyes first worked with Schissel on a project about integrating multilingualism into teacher education. Her analytical skills impressed Schissel so much, she asked Reyes to co-author a manuscript, now under review. Since then, they’ve begun another paper and presented at three conferences.

Last fall they traveled to Mexico, to examine multilingual approaches to classroom language assessments at the Universidad Autónoma Benito Juárez de Oaxaca. Reyes took part in an ongoing collaborative project with Oaxaca English instructor Julio Morales and his students.

Reyes observed Morales’ classes and interviewed students who spoke numerous Indigenous languages, in addition to Spanish and English. “Oaxaca is among the most linguistically diverse areas in Mexico, but speakers of Indigenous languages remain largely stigmatized,” she explains. “I conducted the interviews in Spanish, and I felt as though because we shared a common language, the students were more comfortable speaking with me.”

Students discussed their use of different languages in and out of the classroom and how that helped them learn English. Using Indigenous languages, they said, helped them with English pronunciation when they were phenotypically similar. It also helped when Morales used Spanish and English to clarify certain concepts.

“Mr. Morales’ multilingual approaches — rooted in honoring local knowledge traditionally excluded from the classroom — impact teaching and assessment in his class every day,” says Reyes. “They bolster the understanding that learning isn’t just about receiving information.”

Reyes’ research with Dr. Jamie Dickens, assistant professor of teacher education, may help change that. As a former ESL teacher, Schissel has observed how traditional assessment practices can hinder learning and has focused much of her research on the integration of multilingual approaches into instruction and assessment, particularly for language classes. “Making use of learners’ multilingual resources holistically,” she has found, “is beneficial for language learning.”

Reyes first worked with Schissel on a project about integrating multilingualism into teacher education. Her analytical skills impressed Schissel so much, she asked Reyes to co-author a manuscript, now under review. Since then, they’ve begun another paper and presented at three conferences.

Last fall they traveled to Mexico, to examine multilingual approaches to classroom language assessments at the Universidad Autónoma Benito Juárez de Oaxaca. Reyes took part in an ongoing collaborative project with Oaxaca English instructor Julio Morales and his students.

Reyes observed Morales’ classes and interviewed students who spoke numerous Indigenous languages, in addition to Spanish and English. “Oaxaca is among the most linguistically diverse areas in Mexico, but speakers of Indigenous languages remain largely stigmatized,” she explains. “I conducted the interviews in Spanish, and I felt as though because we shared a common language, the students were more comfortable speaking with me.”

Students discussed their use of different languages in and out of the classroom and how that helped them learn English. Using Indigenous languages, they said, helped them with English pronunciation when they were phenotypically similar. It also helped when Morales used Spanish and English to clarify certain concepts.

“Mr. Morales’ multilingual approaches — rooted in honoring local knowledge traditionally excluded from the classroom — impact teaching and assessment in his class every day,” says Reyes. “They bolster the understanding that learning isn’t just about receiving information.”

Reyes’ research with Dr. Jamie Dickens, assistant professor of teacher education, may help change that. As a former ESL teacher, Schissel has observed how traditional assessment practices can hinder learning and has focused much of her research on the integration of multilingual approaches into instruction and assessment, particularly for language classes. “Making use of learners’ multilingual resources holistically,” she has found, “is beneficial for language learning.”

Reyes first worked with Schissel on a project about integrating multilingualism into teacher education. Her analytical skills impressed Schissel so much, she asked Reyes to co-author a manuscript, now under review. Since then, they’ve begun another paper and presented at three conferences.
WHEN JOHN Z. KISS WAS NINE YEARS OLD he stayed up late to watch Neil Armstrong take those first steps onto the surface of the moon and tell the world, “That’s one small step for man, one giant step for mankind.” “My life is sort of the space era,” says Kiss, a professor of biology and dean of the UNC Greensboro College of Arts and Sciences.

But there’s no way he could have known in 1969 that he would one day do research that could help humans take longer space flights and live on the moon or Mars.

Kiss is not a rocket scientist. But he’s one of a small cadre of space biologists, scientists who study how living systems function beyond the Earth’s atmosphere.

Kiss has devoted more than 25 years to understanding what happens to plants in space. It’s critical work because, as NASA and other space agencies around the world plan for potential bases on the moon, interplanetary flights, and putting humans on Mars, plants will be essential.

In the sealed environment of a spacecraft, space station, or extraterrestrial base, plants could help turn carbon dioxide exhaled by astronauts back into oxygen they can breathe in again. They could also produce food — essential when the nearest grocery store is back on Earth, hundreds of thousands or millions of miles away.

“Everything I’ve done has really been basic research in plants,” Kiss explains. “We pursue basic discoveries, and some of them will have practical benefits in the long term.”

Kiss’ work could also have earthly benefits. By studying how plants respond to the stresses of space, for example, we could gain insights that help us understand how we might help plants adapt to stresses such as climate change here on Earth.

Basic research conducted by UNCG scientists could help humans travel farther in space, live on the moon or Mars.
The UNCG biologist has focused on plant physiology and how plants respond to environmental cues. This is an important question for space research, because important plant stimuli, such as gravity and light, can be different off-Earth. Knowing how plants will or won’t grow in these environments is the first step to actually growing plants as part of life support systems in space. Since 1997, Kiss has led or co-led experiments where plants ride into space on rockets and are then exposed to different gravity environments, like the near-zero gravity of the space station. The phototropic changes Kiss has identified are seen in low-gravity environments, like the near-zero gravity of the space station.

Unlocking those genetic and physiological components that control tropisms will help scientists better understand how and why plants grow the way they do — whether on Earth or on a space station. The research has implications for how we grow plants in different off-Earth environments.

The phototropic changes Kiss has identified all start in low-gravity environments, like the near-zero gravity of the space station. But as the speed of the centrifuge increases and hence the G-force increases, these responses switch off. At around 0.3 G, the plants behave like they do on Earth.

Why does that matter? Because the moon’s gravity is about 0.17 G, so these unusual phototropic effects would apply to plants grown there. Mars’ gravity is stronger — about 0.38 G — above the level at which these phototropic effects switch off.

“The gravity on Mars is probably enough for these plants to grow like they would on Earth,” Kiss says. “But on the moon, it wouldn’t be enough.”

That might suggest different design approaches for cultivation systems developed for the moon, for Mars, or for a long-range spacecraft, like that which would be needed for the month-long voyage to the red planet.

There’s plenty more work to be done. There are other types of tropisms, such as hydrotropism — growth toward water. And different species can exhibit different tropistic behaviors. Sunflowers, for example, which Vanderenbrink studied earlier in his career, turn themselves overnight to face east in the morning when the sun rises. Understanding the genetic and physiological components underlying tropisms provides a rich vein for research.

“Think there are other potentially important discoveries we can make in microgravity?” Kiss says. “There’s this sense of discovery, that’s part of why we do it.”

And ultimately, says, “I would argue that space will maybe help us solve some of the longer-term problems on Earth.”

But for the speed of the centrifuge and hence the G-force to increase, these responses switch off. At around 0.3 G, the plants behave like they do on Earth. At around 0.3 G, the plants behave like they do on Earth. At around 0.3 G, the plants behave like they do on Earth. At around 0.3 G, the plants behave like they do on Earth. At around 0.3 G, the plants behave like they do on Earth.
THE SMALL BRICK BUILDING bookended by empty storefronts on Greensboro’s West Gate City Boulevard doesn’t command much attention. With the exception of its lime-green “CC-ED” sign, you’d be hard-pressed to notice it at all. But inside, the energy is palpable as interior architecture students and their professors join forces with community partners to provide design solutions for nonprofits and Greensboro’s underserved populations.

Travis Hicks doesn’t mind the center’s physical surroundings. As director of UNC Greensboro’s Center for Community-Engaged Design since its headquarters opened in 2014, Hicks celebrates the advantages of an unassuming building. “For some community partners, it helps to have a place that doesn’t have the same institutional feel of the campus,” he says.
Hicks began his career working alongside world-renowned architects Michael Graves and Phil Freelon. The work was challenging, he says, involving teams of people from different disciplines collaborating on difficult, large-scale “puzzles” of building designs. But, he says, the CC-ED is just as complex. “The number of design professionals involved is fewer, but the number of community stakeholders is higher.”

Hicks began his career working alongside world-renowned architects Michael Graves and Phil Freelon. The work was challenging, he says, involving teams of people from different disciplines collaborating on difficult, large-scale “puzzles” of building designs. But, he says, the CC-ED is just as complex. “The number of design professionals involved is fewer, but the number of community stakeholders is higher.”

At home in the community: As CC-ED director, Hicks facilitated more than 50,000 hours of public service in the past year alone. The CC-ED has provided fellowships for more than 40 students and has engaged in over 30 projects, ranging from the Glenwood Grove Mural to home renovations for Community Housing Solutions. Above, Hicks works with graduate student Jessica Ocasio.

Plus, the associate professor of interior architecture knows good design starts from within. The most basic element of a building isn’t a brick; it’s the person who uses the building. So when Hicks and his students partnered with Peacehaven, a working farm for adults with developmental disabilities, to design a new community center, they started by talking with the residents. And when they partnered with Tiny Houses Greensboro, an organization committed to reducing homelessness, they began with a Greensboro citizen who needed a home.

“The concept of community-engaged design is a new and rising force in building and design,” says Hicks, who is certified as both an architect and interior designer. “Folks in the architecture and design fields are exposed to building structures and to electrical and plumbing systems. They learn about sustainable design for historic preservation and dive into public-interest design, where issues like low-income housing and energy efficiency are front and center. Through the CC-ED, they put these ideas into practice working with community partners needing real and immediate solutions.

One of these partners is Peacehaven, a working farm with rolling hills and lush woodland in Whitsett, North Carolina. As Peacehaven grew from a plot of land in 2007 to a home for four residents with developmental disabilities — plus a long wait list of people needing services — co-founder Buck Cochran realized a need for a community center where Peacehaven’s residents, service providers, and volunteers could gather.

“We have so many trusted partners at UNCG, including social work interns who perform essential programming and training for our residents. They needed a place to perform that training,” says Cochran. “We went to Travis Hicks and said, ‘Hey, this is what we’re thinking. Can you help us think about what type of structure would fit with this farm vernacular?’

Cochran was blown away by the CC-ED’s approach. “They started by listening,” Cochran says. “Then they asked clarifying questions, ones that may challenge you a little in your thinking. And they were able to combine a lot of different ideas in a way that was really meaningful.”

Not only did the students’ brainstorming sessions include Cochran and other members of the Peacehaven leadership team, they pulled in residents and their caretakers to better understand how the space would be used. “I’m afraid when most people think about folks with disabilities, they discount the value they could bring to this process,” Cochran says. “But when you create the right setting, those ideas will come.”

When Peacehaven’s new community center is constructed, its residents will recognize many of their ideas. “Folks on the autism spectrum can be overwhelmed by a large space,” Cochran says. “Because of the input from our residents, Hicks and his students carved out smaller spaces in the community center where residents could go to find reprieve from larger group activities, if they need a retreat.”

Cochran sees the CC-ED as an economic catalyst for the broader community. “They’re an unbelievably important resource. We don’t have the capacity to generate these things on our own, but they got us to a point where we could see their plans to fruition. We’re now able to hire builders who will bring it to life,” Cochran says.

Not to mention the impact a project like this has on the students, he adds. “Soon, they will drive down the road, point to a new building and say, ‘I designed that, and it is having a positive impact on my community.’ That is incredible real-life experience.”

There’s more to interior architecture than picking out paint colors and accessorizing. Students in UNCG’s Department of Interior Architecture are exposed to building structures and to electrical and plumbing systems. They learn about sustainable design for historic preservation and dive into public-interest design, where issues like low-income housing and energy efficiency are front and center. Through the CC-ED, they put these ideas into practice working with community partners needing real and immediate solutions.

One of these partners is Peacehaven, a working farm with rolling hills and lush woodland in Whitsett, North Carolina. As Peacehaven grew from a plot of land in 2007 to a home for four residents with developmental disabilities — plus a long wait list of people needing services — co-founder Buck Cochran realized a need for a community center where Peacehaven’s residents, service providers, and volunteers could gather.

“We have so many trusted partners at UNCG, including social work interns who perform essential programming and training for our residents. They needed a place to perform that training,” says Cochran. “We went to Travis Hicks and said, ‘Hey, this is what we’re thinking. Can you help us think about what type of structure would fit with this farm vernacular?’

Cochran was blown away by the CC-ED’s approach. “They started by listening,” Cochran says. “Then they asked clarifying questions, ones that may challenge you a little in your thinking. And they were able to combine a lot of different ideas in a way that was really meaningful.”

Not only did the students’ brainstorming sessions include Cochran and other members of the Peacehaven leadership team, they pulled in residents and their caretakers to better understand how the space would be used. “I’m afraid when most people think about folks with disabilities, they discount the value they could bring to this process,” Cochran says. “But when you create the right setting, those ideas will come.”

When Peacehaven’s new community center is constructed, its residents will recognize many of their ideas. “Folks on the autism spectrum can be overwhelmed by a large space,” Cochran says. “Because of the input from our residents, Hicks and his students carved out smaller spaces in the community center where residents could go to find reprieve from larger group activities, if they need a retreat.”

Cochran sees the CC-ED as an economic catalyst for the broader community. “They’re an unbelievably important resource. We don’t have the capacity to generate these things on our own, but they got us to a point where we could see their plans to fruition. We’re now able to hire builders who will bring it to life,” Cochran says.

Not to mention the impact a project like this has on the students, he adds. “Soon, they will drive down the road, point to a new building and say, ‘I designed that, and it is having a positive impact on my community.’ That is incredible real-life experience.”
“I originally chose UNCG because it’s one of the few programs that offer an MFA in interior architecture in the state,” says Ocasio. “When I looked into the program, I realized how holistic it was and how many opportunities it offered.”

TINY HOUSE, BIG IMPACT
Hicks and his students understand that sometimes big projects come in small packages. In her last semester as an MFA candidate in the interior architecture department, CC-ED student fellow Jessica Ocasio accepted a design internship that would allow her to use her skills to transform people’s lives. As the summer intern with Tiny Houses Greensboro, or THG, a young nonprofit committed to reducing homelessness by building affordable and permanent tiny houses, Ocasio received an extraordinary challenge: to design their first tiny house, which would serve as a blueprint for five homes in a new tiny house community.

“Working at the CC-ED, I’ve learned the importance of partnering with the community — not just designing something and imposing it on them,” Ocasio says. “As designers, we shouldn’t assume we know what’s best.”

Ocasio applied that principle as she set about designing a 288-square-foot home with a kitchen, bathroom, and bedroom. “One of the board members of Tiny Houses Greensboro is experiencing homelessness, and I got feedback from him,” Ocasio says. She also listened to advice from colleagues at THG, who worked directly with homeless people and understood the features required for a sustainable home. “Homeless people are looking for a sense of community. They want their own space and privacy, but it’s also important to them to be a part of a bigger community where their washability and connectivity,” she says. These spaces are oftentimes found downtown, where spacious — and expensive — loft apartments are the growing trend. “People in their 20s tend to be more transient, so offering them a space that is comfortable — a place they can call home.”

Ocasio is working to identify a set of design elements that could be incorporated into microdwellings to make them more attractive to millennials — features like a table that folds out from sofa beds. “You also want to maximize the natural light and utilize all your vertical space,” she says. “It’s all about giving people a space that is comfortable — a place they can call home.”

MILLENNIALS AND MICRODWELLINGS
When Ocasio accepted a summer internship with Tiny Houses Greensboro, she knew she expected to design the prototype for the organization’s first six-house community. The experience went hand-in-hand with her thesis, where she’s studying microdwellings — tiny houses, included — and how these spaces could be better designed to fit the lifestyle of millennials.

“Millennials are looking for a sense of community. They want their own space and privacy, but it’s also important to them to be a part of a bigger community where they can washable and connect,” she says. These spaces are oftentimes found downtown, where spacious — and expensive — loft apartments are the growing trend. “People in their 20s tend to be more transient, so offering them a space that is comfortable — a place they can call home.”

Ocasio says she’d first envisioned designing a loft for the bedroom in order to maximize space. “But then we started talking with the residents, and we thought maybe there’s something more.”

“Working at the CC-ED, I’ve learned the importance of partnering with the community — not just designing something and imposing it on them.”

To get the Cottage Grove residents’ feedback on the new project, the students printed out images of different outdoor designs, such as lamp posts and playground equipment, and asked residents to circle the things they would most like to see in their space. Having a visual aid was especially important for a diverse group of end users that included non-English-speaking immigrants and refugees.

Graves says she and her team members expected the Cottage Grove residents to gravitate toward features such as a playground for their children. “But they circled things like trash cans and covered bus stops.” Soon, those worksheets will translate into visually appealing, functional spaces that enhance the lives of Cottage Grove residents.

Hicks adds that not only was the team able to use those circled images as a way of sparking conversation, they got more feedback than they would have with a standard survey. “With my experience teaching and observing other community-based designers over the years, I’ve been exposed to a lot of different techniques for working with community members to get their input,” he says. “Knowing which ones are most appropriate requires a lot of listening and trying to understand the people with whom we’re collaborating.”

This thought leadership and approach to fostering the next generation of designers caught the attention of the national Council for Interior Design Accreditation, who honored Hicks and the CC-ED with the 2015 CIDU Award of Excellence. That same year, the North Carolina Campus Compact recognized Hicks with the statewide Robert L. Siggins Service-Learning Award.

“Students who study under me in UNCG’s interior architecture program are exposed to a different way of practicing design — one that includes participants from all walks of life, from the CEO to your average neighborhood Joe,” Hicks says. “I hope my students come out of UNCG with a bit more empathy toward different perspectives and different populations, and are able to work in meaningful ways that will impact their own communities wherever they go.”

“THG broke ground on the community last summer. "Seeing it being built is surreal,” Ocasio says. “Just last week, I made some adjustments to that original design, and now the new version is being used to get permits for the last three houses in the community.”

FROM THE GROUND UP
As part of the design process, Hicks teaches his students have to talk to their end users to get their input. “There’s not a single formula with a guaranteed outcome, some creativity is required.”

“As a student fellow at the CC-ED, UNCG senior Elizabeth Graves remembers a project with Greensboro’s Cottage Grove community. The neighborhood had a vacant outdoor space atop a former landfill, and Graves and her peers were tasked with recommending landscaping and design improvements.

The CC-ED already had a strong relationship with Cottage Grove residents. Under Hicks’ leadership, students had helped to design a new Mustard Seed health clinic in a former parsonage offered by New Hope Missionary Baptist Church. They’d also designed a master plan for a future community center, community garden spaces, and education spaces.

“The CC-ED is the first community design center to be housed in a department of interior design or interior architecture,” says Hicks.

“Students who study under me in UNCG’s interior architecture program are exposed to a different way of practicing design — one that includes participants from all walks of life, from the CEO to your average neighborhood Joe,” Hicks says. “I hope my students come out of UNCG with a bit more empathy toward different perspectives and different populations, and are able to work in meaningful ways that will impact their own communities wherever they go.”

By Robin Sutton Anders  •  Photography by Martin W. Kane  •  Learn more at https://arc.plu.edu/cc-ed

Assembly REQUIRED

GROUP EFFORT: Volunteers, Ocasio (above), and other CC-ED fellows and alumni help with construction of a new Tiny Houses Greensboro community. CC-ED students were also at the table in the organization’s early days, participating in the development of THG’s vision and strategic planning.
AS A YOUNG EDUCATION PROFESSOR IN THE 1970S AND 1980S, Dr. Tom Martinek was interested in the impact of teacher expectations on students — the Pygmalion effect. He was preparing future PE teachers and working to understand how things like “learned helplessness” might affect students.

“That research was a stepping stone for me to begin to try things out, to take that research and try to apply it to programs in the community,” says Martinek, now a professor of kinesiology.

His early work helped at-risk kids through after-school programs that involved physical activity. They were mostly short-term efforts that ran for a year or two and provided Martinek with fodder for journal articles.

But Martinek wanted to do more. And he thought a framework called Teaching Personal and Social Responsibility through Physical Activity, or TPSR, was the key.

TPSR was developed by Don Hellison, a now-retired professor at the University of Illinois at Chicago. The framework sees sports and physical activity as a way to teach children important skills and values — self-control, respect for each other, trying your best, setting personal goals, and helping others.

Martinek’s opportunity came when the principal of Greensboro’s Hampton Elementary School approached him in 1991 for help.

“She thought the students were really vulnerable to dropout and different kinds of risk behaviors later on,” Martinek says. “She also knew that a lot of these kids didn’t have much to do after school.”

Most of the kids who attended Hampton lived in the nearby Morningside Heights public housing community. With a little funding from an NC State University grant program, Martinek began bussing 24 third, fourth, and fifth graders to UNC Greensboro twice a week after school.

THE LONG GAME

A winning effort to equip kids for success

WHO’S PYGMALION?
The Pygmalion effect, named for George Bernard Shaw’s 1913 play, describes how higher expectations of student success by a teacher can promote higher student performance.
It was the birth of Project Effort, a program that still operates more than 25 years later and has become a national model for using sports to help kids who are at risk develop critical life skills.

A typical after-school session includes reviewing goals, physical activities in small groups, and then discussion and reflection on their activities.

For the students in Project Effort, grades improved, but more important were the changes in in-school behavior. Martinek and two graduate students reviewed four years of data to measure changes in how often students were reprimanded by their teachers or were referred to the principal’s office.

Over the course of a year, the average number of referrals to the principal’s office dropped from 11 to 9 per student. More striking was the reduction in teacher reprimands over the same period — from an average of 41.41 during the first quarter to 28 during the last, a 31 percent decrease.

Students stayed in the program through elementary school and middle school. When they reached high school, they started directing some of the activities themselves, learning valuable leadership skills.

“I remember a bunch of teenage kids,” says Rashard Jones, who first encountered the program in 2001, when he was an art teacher at Hampton and a youth baseball coach. “The program was intentional about empowering these teenagers.”

Throughout the years, Martinek was there — patient, persistent, purposeful — mentoring UNCG students and the children who came to the program.

Jones remembers one middle school girl in particular. Her father and two brothers were incarcerated. “I know initially she was probably pretty tough to work with,” Jones says. But Martinek persisted. By high school, the young girl was a Project Effort student leader, and she went on to earn bachelor’s and master’s degrees.

“She’s a high level of love, empathy, compassion and just sveliness,” Jones says. “It draws other people in, makes them want to be a part of it.”

MISSED OPPORTUNITIES

Martinek is at the forefront of a growing movement of scholars who want to be a part of it. Santos Flores, a second-year PhD kinesiology student working with Martinek, says youth sports in America often focus narrowly on skill development, reducing the potential positive impact.

“Instead, Flores says, young people should be encouraged to participate in multiple sports, which can improve their physical performance and assist in preventing injury.

And most youth sports programs do a poor job of connecting lessons learned in sports to other areas of a child’s life, a key value of TPSR.

LESSONS ABROAD

Others at UNCG are looking at how TPSR can be expanded and how lessons learned from Martinek’s Project Effort might apply outside the United States.

Assistant Professor of Kinesiology Michael Hemphill met Martinek in 2008 through a workshop at Purdue University, where Hemphill was attending graduate school.

“That was a clarifying moment,” Hemphill says. He realized there had been a lot of work done on how to implement TPSR programs, but not much on how to train professionals to use it.

In Hemphill’s first job after graduation, he helped train undergraduates who would go on to work with youth. He also traveled to New Zealand and began to develop a relationship with a TPSR researcher there.

In 2016, Hemphill came to UNCG. There, he met Dr. Emily Janke, associate professor of peace and conflict studies and director of the university’s Institute for Community and Economic Engagement, who was interested in restorative justice.

A GAME CHANGER

Hemphill says restorative youth sports operate on three levels:

1. First, everything is done in a “restorative manner,” with the aim of building and maintaining strong interpersonal relationships and a sense of community.

On the second level are awareness circles, helping youth have constructive conversations and solve problems. Sports provide opportunities for kids to have these conversations and practice self-awareness.

2. On the second level are awareness circles, helping youth have constructive conversations and solve problems. Sports provide opportunities for kids to have these conversations and practice self-awareness.

3. The third level comes into play when conflicts or wrongdoing must be resolved. “A facilitator would frame the conversation around what happened and why, what needs to be done to repair that situation, and what can be done for the future.”

Restorative justice concepts are very common in New Zealanders’ lives — with one notable exception. “There was this culture of sports that kind of prioritized winning and kids just having fun,” Hemphill says. “It’s like the last frontier of restorative justice is sports. They just haven’t connected.”
Hemphill says. “There really is an opportunity to think about restorative melding of restorative concepts and TPSR. The result is what Hemphill calls restorative youth sports, a he says. But linking TPSR with restorative practices could be powerful, restorative justice is sports. They just don’t connect.”

There was this culture of sports that kind of prioritizes winning and kids just having fun,” Hemphill says. “It’s like the last frontier of life skills that can help them be more successful. "I think we’re talking broadly about the same value set," Hemphill says. Hemphill wondered whether youth athletics programs could be connected with restorative justice. Last year, he and Janke received UNCG support, in the form of a Faculty First Award and a School of Health and Human Sciences grant, to find out. It was a relatively unexplored concept in New Zealand. Hemphill worked with on Project Effort struggled. As they entered high school, some of the students Martinek worked with on Project Effort struggled. "They all had different pathways, but regardless of the context, one thing that came out was the idea of relationship building," Martinek says. “And of having had some sense of control over what they could do in their own situations. The idea of self-direction was an important quality they took with them.” To succeed, you need to feel like you have a say in your destiny. "Getting the sense that you can change things around, control things, that gives them that foothold," Martinek says. “I think that’s probably the most important thing.”

Martinek  •  Learn more at https://go.uncg.edu/martinek and https://go.uncg.edu/hemphill

Project Effort’s influence is also felt in other programs that serve at-risk youth, such as the Communities in Schools African American Male Initiative, run by Jones, the former Hampton art teacher. "Since we started this program, Martinek has brought Project Effort over every Tuesday," Jones says. Project Effort leaders mentor the youth in Jones’ program. “Our kids get the benefit from it, because of those kids who are coming from the Middle College.”

No matter how many young people these programs touch, the focus remains the same. Martinek wants to give children the sense they can control and improve their own lives. When Martinek and his students conducted a study following up with adult graduates of Project Effort, they discovered many of the program’s lessons are sticking. “They all had different pathways, but regardless of the context, one thing that came out was the idea of relationship building,” Martinek says. “And of having had some sense of control over what they could do in their own situations. The idea of self-direction was an important quality they took with them.”

To succeed, you need to feel like you have a say in your destiny. "Getting the sense that you can change things around, control things, that gives them that foothold," Martinek says. “I think that’s probably the most important thing.”

By Mark Tosczak  •  Portrait photography by Mike Dickens, Project Effort photography courtesy of Tom Martinek  •  Learn more at https://go.uncg.edu/martinek and https://go.uncg.edu/hemphill


growing with the program

Project Effort is not Martinek’s only legacy. Another is the development of the Middle College at UNCG, a Guilford County public high school Martinek was a key partner in starting. As they entered high school, some of the students Martinek worked with on Project Effort struggled. "They would either not show up to school," Martinek says. “Or they would show up and not do anything. Sometimes they’d show up and cause problems.”

Research done by one of his graduate students indicated a major reason for this was cultural differences between Project Effort and the high school environment. Martinek dreamed of a school based on Project Effort principles, where those high school students could take leadership roles, make more decisions themselves, and thrive.

He learned that the Guilford County Schools superintendent was interested in a middle college — a public school located on a college campus. It took a few years, but in 2011 the Middle College at UNCG opened. These days, Middle College high school students help run the Project Effort programs. "We’ve got a great group of high school kids who do a great job," says Martinek. “It’s been a nice marriage.”

Not unlike the marriage that Martinek has forged over the last few decades between UNCG and the community.

Some 800 Guilford County children have been touched by Project Effort.
Attack of the Killer Ticks

Imagine a world in the not-too-distant future where the government assigns where you live. Your social media footprint impacts your future employment and investment portfolios. “My guiding philosophy is that doing something is always better than doing nothing,” she says. “And a lot of people are doing nothing.”

The Salt Line imagines a dystopian America ensconced behind a tick-repellent scorched earth barrier. The nation holds tight the government assigns where you live. Your social media footprint impacts your future employment and investment portfolios. “My guiding philosophy is that doing something is always better than doing nothing,” she says. “And a lot of people are doing nothing.”

While previous works — the 2009 short story collection “Girl Trouble” and her 2014 debut novel “The Next Time You See Me” — are realistic tales of blue collar life in rural Kentucky, Jones’ second novel takes a futuristic bent. “The Salt Line” imagines a dystopian America ensconced behind a tick-repellent scorched earth barrier. The nation holds tight to a disturbing alternate reality.

Female characters in the story, once relegated to traditional maternal roles, rise up to protect the future. Jones wrote the first hundred pages of the book before becoming pregnant with her first child; she says the story’s trajectory changed when she became a mother. “When I started having kids, the future went from being abstract to deeply personal. That’s when the theme of motherhood became so critical to the book — less because I was newly a mother and therefore interested in writing about the topic but because I suddenly realized that parental permission is sort of the central question in any meditation about the future.”

Jones is committed to sustainability and responsible resource management in her own life. She devotes a section of her professional website to advice about sustainability practices, from cost-benefit analysis of solar panels and electric cars to reflections on socially conscious investment portfolio. “My guiding philosophy is that doing something is always better than doing nothing,” she says. “And a lot of people doing something will matter.”

As a writer, scholar, and environmentalist, Jones raises complex moral and political issues while keeping some perspective: “If a reader has a good time with the book, and has her thoughts provoked, that’s enough for me.”

Jones is committed to sustainability and responsible resource management in her own life. She devotes a section of her professional website to advice about sustainability practices, from cost-benefit analysis of solar panels and electric cars to reflections on socially conscious investment portfolio. “My guiding philosophy is that doing something is always better than doing nothing,” she says. “And a lot of people doing something will matter.”

As a writer, scholar, and environmentalist, Jones raises complex moral and political issues while keeping some perspective: “If a reader has a good time with the book, and has her thoughts provoked, that’s enough for me.”

By Heather C. Wilson  •  Photography by Mike Dickens  • Learn more at uncg.edu/goldenjones

FIGHTING TO BE HEARD

A homemade pan of lasagna saved his documentary project.

For nine years, Department of Media Studies Professor Matthew Barr spent weekends traveling to Tar Heel, North Carolina. There he filmed “Union Time: Fighting for Workers’ Rights,” about the 16-year struggle of workers to organize the world’s largest pork processing plant. Shortly after their victory, Barr’s project unexpectedly ran into trouble. He had cultivated relationships with Smithfield Packing Co. slaughterhouse employees and United Food and Commercial Workers organizers, but one of his primary interview subjects and a leader in the fight suddenly didn’t want to be filmed anymore.

It took Barr’s culinary talents to win her over.

As Barr had gotten to know the workers, he learned that she liked a dish that happened to be one of his favorites. “I made a big pan of lasagna and drove it down to the union headquarters,” he says. “I understood the personal pressure that those workers were under. I wanted to show that I cared about them, and that it wasn’t ‘just a story.’” The personal approach paid off. She resumed her participation in the film and, thanks to her influence and Barr’s persistence, others stepped forward too.

Barr trimmed 170 hours of footage into what he calls “96 minutes of oral history and documentary” for the film’s premiere at UNCG in 2016. The final product, narrated by actor and activist Danny Glover, explores what Barr calls “David versus Goliath” story. “It depicts the atmosphere of injury and intimidation that prevailed at the Tar Heel plant,” says Barr. “Fear of losing their jobs deterred many workers from openly participating in union efforts.”

“It shows the courage of the workers who fought for a union, and how working conditions improved when — after two failed attempts — they finally succeeded.”

Barr has presented the film at the headquarters of the National Labor Relations Board in Washington, D.C., universities including Cornell University and UCLA, organized labor conferences, festivals, and churches. This summer he plans to produce hour-long and half-hour versions aimed at the education market, union-training programs, and organizing drives.

“The film’s message of solidarity resonates with many audiences,” says Barr. “African American, Hispanic, Lumbee, and white workers came together, and that is very powerful.”

“Union Time” is the latest product of Barr’s nonprofit, the Unbowed Voices Project, which produces documentaries about working people facing challenges of globalization and economic upheaval. Other films include “Wild Caught,” about the troubles of a fishing community in Sneads Ferry, North Carolina, and “With These Hands,” a look at the struggling U.S. furniture industry through the closing of the Hooker Furniture factory in Martinsville, Virginia.

Barr had always wanted to produce a documentary about a union and was excited when an acquaintance introduced him to the Smithfield campaign. Two UNCG grants totaling $10,000 funded his early work on “Union Time,” while $85,000 from individuals, including relatives, enabled him to complete the project.

“To me, making this film was a huge act of faith,” Barr says. “I believe it tells an important story. It is history told by the people who made it.”

By Chris Burritt  •  Photography by Mike Dickens, illustration from “Union Time” by Alexis Rodriguez  • Learn more at https://go.uncg.edu/barr
AFTERMATH

Two natural disasters, roughly a century apart, devastate a pair of American port cities.

One quickly regained its position as a center of global commerce. The other became a cautionary tale on how not to manage a disaster.

Unc-Greensboro sociology professor Steve Kroll-Smith examines how market forces, class, and race combined to produce two different outcomes in two natural disasters, roughly a century apart, devastate a pair of American port cities.

An estimated 1,800 people died because of the storm, including more than 1,500 in Louisiana.

High saturated fat diets physically alter the way we think about food. They wreck the brain’s pleasure center, requiring ever more saturated fat to elicit the same level of enjoyment. Assistant professor Steven Fordahl is determining how and why that wreckage occurs.

Dr. Fordahl explores the flow of neurotransmitters in the brain to identify the causes of — and potentially treatments for — obesity. Obesity is one of the fastest growing public health concerns in America. According to the Centers for Disease Control and Prevention, it affects over one-third of our population.

Unc-Greensboro’s Department of Nutrition last year, uses it to illustrate the profound effect that dietary choices have on normal brain function.

Kroll-Smith says disasters create “fissures” in society. “You see what actually makes people tick, what keeps things hanging together.”

Katrina was in a lot of ways a school marm, in that she had a lot to teach us. Kroll-Smith says. Still, relief wasn’t made very accessible for anybody.

The Roosevelt administration made it a top priority to get the city back up and running.

The coming years, Kroll-Smith says, will likely bring similar catastrophes.

New Orleans in 2005. The first, 2015’s “Left to Chance: Hurricane Katrina,” focused on two mostly African American neighborhoods, one working class, the other middle class.

More people in the middle-class neighborhood were able to evacuate prior to Katrina’s arrival, and were able to apply for assistance more easily as a result, Kroll-Smith says. Still, relief wasn’t made very accessible for anybody.

It became a real feat of gymnastics to jump through the necessary hoops to get the money set aside for rebuilding your house, buying new furniture,” he says. “The administration of relief itself became a significant stressor in people’s lives.”

Last year, Hurricanes Harvey and Maria devastated Houston and Puerto Rico, causing hundreds of billions in damage. The coming years, Kroll-Smith says, will likely bring similar catastrophes.

Katrina was in a lot of ways a school marm, in that she had a lot to teach us about what we can anticipate in terms of severity of storms, and in terms of how unprepared we are for a relief effort,” he says. “I don’t think those lessons were learned, quite frankly. And we need to think of more than infrastructure recovery itself...”

The administration of relief itself became a significant stressor in people’s lives.”

Food for Thought

Kroll-Smith says disasters create “fissures” in society. “You see what actually makes people tick, what keeps things hanging together.”

Fordahl’s results already have important implications for obesity prevention. As he digs deeper into how saturated fats reprogram the brain, he ultimately hopes to discover how to reverse the whole process and restore the body back to health.

By Rebecca Guenard  •  Composite image by Mike Dickens  •  Learn more at https://go.uncg.edu/fordahl
GIANT STEPS
UNC Greensboro’s impactful School of Nursing and science programs will soon have a new home. Thanks to a voter-supported Connect NC bond, the outdated McIver Building will come down this year to make way for a new Nursing and Instructional Building. With 14 classrooms and 36 labs, the five-story, 180,000-square-foot building will provide much-needed space for our growing programs — allowing our regional and national impact to expand for decades to come. https://go.uncg.edu/BigBuild