



Pg. 18 THE TEACHER CRISIS IN RURAL COLORADO

Pg. 23

New Roots in

Old Traditions

Pg. 12 Bears About Town Pg. 26 The Next Chapter of *Moneyball*

The View from Here

Я÷?

UNC SUPERFAN

Meet superfan Topher Ahrens, a sophomore from Parker. Inspired by a friend who leads a vibrant student section at another university, Ahrens went big at all but two of UNC's home men's and women's basketball games this past year to pump up the players and the crowd. A favorite moment from the season? When UNC's Jordan Davis chased down a fast-breaking point guard at an away game in Denver and rose above the hoop to block his opponent's shot. "I just went crazy," Ahrens says. "And all the DU fans booed me, but I didn't care!"

Table of Contents

UNC MAGAZINE | UNCO.EDU/UNCMAGAZINE SPRING/SUMMER 2017



Features

12 BEARS ABOUT TOWN

UNC alumni create strong ties between campus and the Greeley community as they create buzz and businesses around town.

18 THE TEACHER CRISIS IN RURAL COLORADO

Cash-strapped small districts that serve 130,000 students struggle to attract and retain educators as fewer students enroll to pursue the profession.

23 **NEW ROOTS IN OLD TRADITIONS**

The School of Music welcomes a Bluegrass and Folk program to its notable circle, creating space for a diverse soundscape.

26 THE NEXT CHAPTER OF MONEYBALL

UNC professor offers his sports-science research to Major League Baseball to help project the next great player.

Departments

2 @UNC

Find out what's newsworthy, noteworthy and uniquely UNC.

- 8 Northern Vision Learn how UNC is making a difference locally and globally through research, teaching and philanthropy.
- **30 Blue & Gold** Catch up with Bears near and far.

ON THE COVER

An Ault RE9 district school bus driver begins an early morning route in Nunn, Colorado.

Online Extra

NFL TEAMS EYE BEARS QB

As UNC Magazine was going to press, the Green Bay Packers, San Francisco 49ers and Pittsburgh Steelers had taken notice of Bears quarterback Kyle Sloter. There has been pre-draft speculation that his name might be called as early as the fifth round. Did Sloter become the first UNC player to be drafted since 2006 when Washington selected Reed Doughty?



University News & Public Relations, Judy Farr Alumni Center, 1620 Reservoir Road, Campus Box 11, Greeley, CO 80639, Phone: (970) 351-2551, Fax: (970) 351-1835, E-mail: UNCMagazine@unco.edu UNC Magazine is a semiannual publication of the University of Northern Colorado and is complimentary to alumni and friends. The views presented are not necessarily those of the magazine staff or the official policies of the university. All material in the magazine ©2017 by the University of Northern Colorado and individual photographers.

I'm a Bear

MARIE L. GREENWOOD '35 ELEMENTARY EDUCATION

CENTENARIAN

Born Nov. 21, 1912, Marie Greenwood is 104, and has been active all of her life. She has fond memories of Gunter Hall, and her favorite courses at Colorado State College of Education now UNC, were in physical education. When she graduated in 1935, Greenwood was only a few credits shy of earning a double major in P.E. Active all her life, Greenwood enjoyed alpine skiing well into her 70s.

GROUNDBREAKER

After graduating, Greenwood became the first African-American teacher hired on contract directly by Denver Public Schools. She retired in 1972 after more than three decades working with Denver students.

EDUCATOR

"I taught first grade for 30 years in the Denver Public Schools. I believe it is there that one lays the beginning of a sound education foundation upon which a child can continue to learn successfully." In 2001 DPS honored Greenwood's career of service by naming a school in her honor, the Marie L. Greenwood Academy.

AUTHOR

"I believe that every child can learn and that philosophy still matters, just the methods have changed." Greenwood published her philosophy in her book *Every Child Can Learn* and chronicled her life experience in the autobiography *By the Grace of God*, which she published for her 100th birthday in 2012.

HONOREE

UNC awarded Greenwood an Honored Alumni Award in 1997 and invited her to deliver the commencement address in 2007. The Colorado State Board of Education honored her as "A Trailblazer in Education for the Children of the State of Colorado" in February 2017.

FAMILY TRENDSETTER

"I graduated when it was called Colorado State College of Education, my daughter from Colorado State College, and my son from the University of Northern Colorado."

HARD WORKER

Greenwood wears a simple chain necklace every day. From it hangs the ring of her late husband, Will, and the cross that her parents gave her upon graduating from junior high school. Greenwood's family believed in the power of education and knew that with hard work Greenwood could earn a college education. "My father told me I could do anything and if I worked hard enough I could do it better."

PHILANTHROPIST

In 2009 Greenwood and her family established the Marie L. Greenwood Scholarship. The program provides an annual scholarship to a UNC first-year education major who graduates from Denver Public Schools, with a preference for students from her namesake school, Marie L. Greenwood Academy.



UNC LEADS WITH ITS PEOPLE IN LATEST MARKETING PUSH

Long known as Colorado's "rightsized" institution, affording students uncommon access to faculty who are teachers and scholars/artists/ practitioners, UNC's latest statewide advertising campaign attempts to underline what that means for UNC Bears: a higher education experience "at eye level."

While much of the university's brand marketing continues to share distinguishing features and program offerings, billboards on I-25 outside Fort Collins, in downtown Greeley, at Denver International Airport, on a new website and elsewhere, are leading with faces.

They're the faces of graduate and undergraduate students, faculty and other members of the campus community.

> Watch the campaign videos at unco.edu/eyelevel

UNC SHRINKS CARBON FOOTPRINT WITH NEW INITIATIVE

UNC is taking another big step in reducing its carbon footprint through a partnership with McKinstry, a national company with offices in 15 cities that focuses on energy and operation efficiency in existing and new buildings.

McKinstry audited 1.3 million square feet in 18 buildings on campus to reveal opportunities to implement energy and operational cost savings strategies with projected annual savings of more than \$500,000 — measures that will reduce the school's carbon footprint.

Improvements focus on buildings' lighting, heating, air conditioning and ventilation systems. In addition to making the buildings more energy-efficient, improvements like replacing nearly 20,000 CFL bulbs with LED ones and equipment improvements that provide more consistent cooling and heating temperatures also enhance the learning environment.

McKinstry also helped secure \$286,000 in utility rebates to offset initial costs of the improvements. Energy and operational savings from the improvements over the next 15 years will pay for their \$8.86 million cost.

News Briefs cont. page 4

Funding Important Work

STATE AWARDS UNC GRANT FOR STUDENT STEM PROGRAM

The Colorado Opportunity Scholarship Initiative awarded UNC a \$99,688 grant for its Learning through Engaging and Authentic Practices Program, a student support services program that helps UNC STEM students persist and graduate in health careers by providing scholarships for residential summer programs, intensive research and gap funding to cover books, materials and other educationrelated expenses.

UNC, MINES PROJECT FOR K-3 STEM EDUCATION AWARDED \$140,000

A UNC partnership with the Colorado School of Mines to increase the quality of STEM instruction in K-3 classrooms received \$140,000 from the Early Childhood STEM Learning Challenge. The schools' partnership reimagines science and math teacher preparation by pairing teacher candidates with seasoned elementary teachers to co-design and deliver engaging STEM lessons to K-3 classrooms.

UNC AWARDED \$2.2 MILLION TO HELP RECRUIT, RETAIN TEACHERS IN RURAL SCHOOL DISTRICTS

See special report on shortages, page 18.

News Briefs cont.

UNC STARTS PROGRAM IN VIETNAM

UNC is expanding its international reach by partnering with Hong Bang International University to deliver the Vietnam institution's first master's degree program in nursing. While UNC has established international partnerships with over 40 institutions on four continents, this is the university's first program that will be offered on premises of a campus abroad.

RESEARCH CONTRIBUTES TO HISTORIC NAVAJO REFORM

Work by UNC professors and an honored alumnus served as the foundation for the Bureau of Indian Education to unite 66 BIE-funded schools in New Mexico, Arizona and Utah.

History Professor Michael Welsh, Special Education Professor Harvey Rude and Northern Arizona University Associate Professor Joe Martin '82 conducted a feasibility study to inform the integrated approach that resulted in the transfer of control of the schools from the BIE to the Navajo Nation.

UNC AGREES WITH NCAA ON RESULTS OF INVESTIGATION

The National Collegiate Athletic Association's investigation of UNC's men's basketball program - started in spring 2016 after UNC became aware of and self-reported potential violations by the program's previous coaching staff—concluded in February when the NCAA's Enforcement Division released its official Notice of Allegations about multiple instances of academic misconduct. UNC expects to hear this fall if its self-imposed penalties, which include financial penalties and restrictions on recruitment and financial aid awards for student-athletes in the program, are acceptable to the NCAA's Committee on Infractions.

>> www.unco.edu/news/?10538



PROFESSOR'S ARTWORK HEADED TO THE MOON

School of Art and Design Professor Anna Ursyn's computer-generated nano-art will be included in a time capsule aboard a lunar rover scheduled to be delivered to the moon later this year. Ursyn's work, titled "Swarm," (pictured above) will be among the thousands of nanoformatted examples of art, architecture, design, music, drama, ballet and poetry included in the Moon Arts Project.

The Moon Arts rover is scheduled to be part of the payload on a SpaceX rocket that will be launched from NASA's Kennedy Space Center in late-2017.

According to project managers, the Space Ark isn't intended to show aliens what life on Earth is like, but rather for future generations of Earth's inhabitants, since the time capsule could last for millions of years given the lack of atmosphere on the moon.

UNC 'BEAR IN MIND' PODCASTS OFFER INSIGHTS ON VARIETY OF ISSUES

UNC's "Bear in Mind" podcasts, which debuted in February, offer insights by UNC faculty, staff and alumni on issues of local or national importance. In the initial episode, political science faculty member Gregory Williams talked about President Trump's first few weeks in office, his campaign promises and the power of the U.S. presidency.

To listen, visit the Bear in Mind website unco.edu/bear-in-mind

ASL DIRECTOR HONORED BY PEERS

Citing her role as a visionary, champion and leader within the field of educational interpreting for more than 20 years, the National Association of Interpreters in Education bestowed its inaugural award honoring leadership in the field to Leilani Johnson, director of UNC's ASL and Interpreting Studies program. The award, named in Johnson's honor, will be presented annually to an interpreter working in education that exemplifies the leadership qualities that Johnson has demonstrated during her career.

HISTORY PROFESSOR EARNS AMERICAN HISTORICAL ASSOCIATION AWARD

UNC History Professor Fritz Fischer won the American Historical Association's 2016 Eugene Asher Distinguished Teaching Award, given annually for outstanding postsecondary history teaching. Fischer is also director of Teacher Education in the History program at UNC.

PHOTO BY WOODY MYERS

Andrea Moon leads the stage movement class.

Syllabus

Tuning the Actor's Instrument

BEFORE CLASS BEGINS, students begin stretching in their gym clothes, pushing a dust mop across the wide stage flooring overlaid on the wood court of Gray Gym. Shoes and jackets are peeled off and left on the risers. Andrea Moon walks over to the sound system and shuts off the music.

"Ohayou gozaimasu!" she calls.

"Ohayou gozaimasu!" the students repeat, seating themselves in a circle. The Japanese phrase means "good morning" and serves as a reminder that whatever time of day the class takes place, each session is like a new day.

Moon outlines the class ahead of them — a warmup, some training, time to practice for a play they'll perform at the end of the semester. The course is designed to help performers move past personal physical habits and translate characters' internal thoughts, emotions and motivations into three dimensions. The point, Moon reminds the class, is, "What happens in the moment when things get difficult?"

It's a physically intensive process.

"I only have so much time to hurt you, so don't worry," she says.

The class laughs, as they do at most of her jokes. She has a quick wit and never blitzes the silence after asking if anyone has questions (or philosophical aphorisms or good jokes). Her classroom is one of full focus and urgent calm, seen in the frozen poses students fall into during the beats of an Imogen Heap song. "That's where the drama is," she tells the class. "What could have happened if you hadn't stopped moving?"

The course pushes students, allowing them to improve their focus, stamina, range of movement and breath efficiency, while breaking out of habits they might not even know they have. Like athletes in training, the students recognize small changes: Feeling more connected. Recovering **CLASS:** THEA 276 Stage Movement II **TAUGHT BY:** Andrea Moon, MFA, Ph.D., Theatre Arts (pictured above)

COURSE DESCRIPTION: In theater, Moon says, actors' bodies are their instruments. Just as musicians practice scales and fingering and take care of their instruments, "this class is designed to do the same thing for a performer's body."

WANT TO TRY IT YOURSELF?

Go to unco.edu/uncmagazine (click on "@UNC," then "syllabus") and let Moon walk you through.

from a mistake and feeling stronger. Realizing a gesture, like an overused word, has become meaningless, and needing to improvise.

At the end of class, everyone circles up again on the floor.

"Otsukare sama deshita," Moon says. *You must be very tired*. It's a traditional sign of respect, acknowledging her students' effort.

"Otsukare sama deshita," they repeat to her, returning the respect. And, after discussing their discoveries, they head out into their new day.

-Rebecca Dell

Quote worthy

Not only do we have to make things happen in the here and now, we must do them with an eye to the future. We are temporary, if passionate, stewards of something far greater than ourselves.

-President Kay Norton about The Campaign for UNC (see page 10)

Voices 🖓

Be About 'the Hang'

ALUMNA ANGELA PARRISH, WHO SINGS THE OPENING SONG IN *LA LA LAND*, REFLECTS ON THE EXPERIENCE.

I met my drummer, Jose Perez (a University of North Texas Jazz Studies graduate), the first day I moved to Los Angeles. I went to The Mint, a live music venue in Los Angeles that I had never been to, in order to hang with a group of musicians I didn't know and listen to a Snarky Puppy concert. I had all of my belongings stuffed into (and on top of) my 2007 Honda Fit, which was my temporary home.

Everything about my first day in Los Angeles was terrifying and uncertain. The only thing that assured me that everything was going to be OK was the fact that I had been connected to these people through my UNC network.

During one of my first classes of my master's curriculum, Professor Jim White told us that his career was in no small part about "the hang," the great people who invest in each other and take care of each other. He instilled the idea that this business is about human beings, and that's where the joy and the magic of the music comes from.

It stuck with me.

Those musicians I met that first night became my regular band, my go-to session guys, and my dear friends. The roller coaster of Los Angeles has bonded us deeply, during the times of doubt and struggle as well as the triumphs of our careers. Three years after we met, Jose referred me to his friend Ryan Svendsen in the music department at Lionsgate to audition for a singing role in a film.

I had no idea that referral would turn into the opportunity to be the opening voice of *La La Land*. I knew it would be an incredible and meaningful piece of art I'd be proud of forever, but I know none of us who made the film could've predicted what *La La Land* would become. (Editor's note: The film won six Oscars, was nominated for eight more, and won seven Golden Globe awards, including Best Picture — Musical or Comedy.)

The experience brought several distinct joys. Of course, the feeling of getting to make a piece of art that will be a legacy has made me feel deeply fulfilled as an artist. The fact that my father, who has Parkinson's disease, was able to experience this career success for me has meant everything to my family. And the fact that this movie was made by incredible, kind, warm, and dedicated creatives has affirmed my belief that the best in the business really are the best people.

Damien Chazelle, Justin Hurwitz, Marius de Vries, Steven Gizicki, Nick Baxter, and Jasper Randall (the creative team I worked with) were some of the kindest and most welcoming creatives I've ever met (and clearly some of the most incredibly talented). It has been so rewarding to watch them receive their due for something they worked on so diligently for many years. It has been a huge blessing to be surrounded with wonderful human beings throughout my career.

I have my alma mater to thank for that. Thank you for teaching me that the best cats on the bandstand are also the best cats off the bandstand. I am so lucky to be a UNC Jazz Studies alum, and I can't wait for the next hang.

-Angela Parrish '12

GO BEARSI

A CULTURE OF COMMITMENT BEARS BUY IN TO COACH ETHRIDGE'S SYSTEM, NOTCH SECOND 20-WIN SEASON IN THREE YEARS

Coming into the 2016-17 season, UNC was an afterthought for media and coaches as they ranked teams in preseason polls. They predicted the Bears would finish no better than ninth, something guards Savannah Smith and Savannah Scott didn't take kindly to.

"Me personally, I was really mad about being ranked ninth just because I knew we were better than that," Smith says.

Her teammate Scott adds: "It definitely put a chip on our shoulder this season. I think we worked harder because of it to prove everyone wrong."

They finished the season leaving no doubt that the Bears are a team to regard. Though their season was cut short in the Big Sky Tournament with a heartbreaking 60-59 loss to Idaho State, the Bears matched the program record for wins with 22, finished the regular season ranked third in the conference and will return all five starters next season. And, Smith and Scott earned first and second team All-Big Sky honors.

Two of the three seasons coach Kamie Ethridge has been in charge, the Bears have reached the 20-win mark. In her first season, Ethridge took UNC to the third round of the WNIT, falling at UCLA, the eventual WNIT champion. The Bears also finished with 22 wins that season.

Ethridge, a Women's Basketball Hall of Famer who was the MVP on the 1986 national champion Texas Longhorns team and went on to earn a gold medal in the 1988 Olympics, credits the winning seasons to player buy-in, the foundation of a winning culture. "It's crucial," she says. "It doesn't matter if I walk in and say this is how I want it to be, if they haven't decided that they want that themselves or communicated that they want to be about those things then it's always coach-driven and the players don't have to take any accountability toward the culture."

When Ethridge took over, she made it obvious that this wasn't a democracy. She set the standards and wasn't going to lower them for anyone. Her players recognized this right away.

"Work ethic has been a big part of this program because Coach Ethridge emphasizes it," senior guard Katie Longwell says. "Coach brings that competitive nature with her and she expects everyone to kind of share in that, so if you didn't want to buy in on hard work and high expectations you weren't going to be here very long."

Smith attests to that.

"We're up at 4 a.m. every day, ready for practice at 6 a.m., and then go to class and have workouts along with it," she says. "It all goes back to mental toughness. We put in a lot of hard work over the summer and I feel like that has prepared us for all the travel and the long weeks of conference play."

And that hard work and culture of commitment will be back next season, as the team sets out to prove once again that they're a team to watch.

–Kobee Stalder

IOTO BY ROB TRUBI

NORTHERN VISION

Assistant Professor Britney Kyle and her students find clues to the

WHAT YOU CAN LEARN FROM BONES Researchers use isotope analysis, a chemical process that looks at elements in excavated bones, and DNA testing to determine

an individual's:
Nutrition (malnutrition)
Health (disease)
Geography (migration patterns)
Resulting data can help establish patterns and reveal ethnic inequality, evolution, human adaptation and the impact of social, cultural and environmental disruption.

BRITNEY KYLE, PH.D Assistant Professor of Anthropology



SKELETON CREWS

UNC ANTHROPOLOGIST BRITNEY KYLE AND HER STUDENTS RECONSTRUCT THE PAST BY EXAMINING BONES OF ANCIENT CIVILIZATIONS

ead people may not tell tales, but their bones do. Britney Kyle, Ph.D., is working with her students to learn more about how humans evolved, lived, suffered or succeeded nearly 3,000 years ago, and she's calling on bones to tell the stories of long-ago populations.

"We study human skeletons from an archaeological context and look at the impacts of colonization in the Mediterranean," Kyle explains.

A biological anthropologist and assistant professor of Anthropology at UNC, Kyle co-directs the Bioarchaeology of Mediterranean Colonies Project with Laurie Reitsema, an assistant professor at the University of Georgia. Their project includes research at seven colonies and two mother-cities on the Mediterranean and Black seas. It was recently named a National Science Foundation funded Research Experience for Undergraduates (REU) site.

With NSF funding, Kyle spends eight weeks each summer with about 10 undergraduates from across the country. In Italy, students examine bones from 12,000 skeletons that are thousands of years old, learn research skills and begin to build the foundation for their own research projects.

"Your skeleton records a lot of your life events," Kyle says, explaining how bones can tell anthropologists about a life lived long ago. "We can tell if a person was stressed (by malnutrition or disease, for example) by looking at levels of stress over time."

Using this information, Kyle and her students can correlate what they've learned with historical documents and social histories. They can also determine migration patterns using isotope analysis to determine where someone grew up, versus where they died. They've begun using DNA tests as well.

The populations Kyle has studied lived nearly 3,000 years ago, including colonies in Sicily, Greece and an area called Apollonia in Albania. "In Albania, I found that at the colony (which was made up of local Illyrians, with a small amount of Greeks), the local population's health definitely declined during colonization."

That information helps Kyle explore the regional origins of ethnic inequality, evolution, human adaptation and the impact of social, cultural and environmental disruption on populations.

"In some ways people are surprised by how much you can learn from a skeleton," Kyle says. "Our goal is to bring those skeletons to life."

-Debbie Pitner Moors

Field Notes

PINPOINTING GAS LEAKS

Jessica Salo (Geography/GIS) contributed to a CSU-led project that used Google Street View cars with specialized equipment to detect invisible natural gas leaks in underground distribution pipes of 11 cities. The results of the study, led by Colorado State University and recently published by the journal *Environmental Science & Technology*, is already helping cities pinpoint pipes that need to be replaced to help minimize greenhouse gas emissions.

DOCUMENTING WOMEN'S HISTORY

An upcoming book by Lee Anne Peck (Journalism) will be the first to document the 75-year history of the Colorado Press Women. Peck interviewed original members of the association and sifted through 14 boxes in the Western Collection of Denver Public Libraries. Last fall, she published the second edition of her media ethics textbook.



UNDERSTANDING ANCESTRAL HOMELANDS

Sally McBeth (Anthropology) received a National Park Service grant to do an ethnographic overview of Florissant National (fossil bed) Monument. The three-year project begins this summer and is designed to bring Native consultants into Florissant (west of Colorado Springs) to help the NPS better understand Native American ancestral homelands.

(??)

STUDYING FOREST FIRE ARSON

Alan Price (Criminal Justice) and David Pringle (Chemistry) are mentoring three students for their study testing accelerants used in forest fire arsons. The students are preparing the research as part of their senior project and will present the work at the American Academy of Forensic Science Annual Conference in 2018.



CREATING YOUTH MEDIA PROJECTS

Dana Walker (Teacher Education) creates and researches youth media projects, such as Transnational Youth Radio linking Greeley and Barcelona schools, that target Latino students and English learners.



CANCER TREATMENT USING CANNABINOIDS

Research led by Richard Hyslop (Chemistry) is making significant progress in developing a targeted cancer treatment using cannabinoids as a chemotherapy agent. UNC faculty Corina Brown (Chemistry) and Ann Hawkinson (Biological Sciences), along with several graduate and undergraduate students, are part of the team working on the project with Hyslop. They're focusing on the feasibility of developing cells capable of producing an enzyme that can convert inactive cannabis compounds into an active anti-cancer drug.





Impact 😌

WE ARE UNC

UNC is about people. A community of uncommon people—alumni, donors, friends, faculty, staff and students—made strong by their diversity, creativity and ingenuity, and united by the transformative education hallmark of the UNC experience.

for

And it's our unwavering commitment to remain truly, uniquely UNC that compels us now to move forward in the advancement of our long-standing mission to:

- deliver high-quality education that remains accessible and affordable;
- change lives through one-on-one faculty/student interaction and cutting-edge research;
- and provide students unequaled access to top faculty who are scholars, artists and practitioners as well as great educators and mentors.

The Campaign for UNC is our public charge to, together, boldly support UNC's uniqueness and advance its mission. We are — you are — the community that makes UNC what it is and, more importantly, what it is capable of becoming.

MAKING THE FUTURE OUR OWN

UNC is thriving. We're more diverse than ever before. Our community is rapidly growing and increasingly engaged. And talented Bears are making an impact around the globe. So, why launch the Campaign for UNC? Why now?

We face a challenge. State funding for public universities is declining with no expectation of recovery to pre-existing levels. Rapidly advancing technologies require continuous improvements and adaptation, which are often costly. And recruitment of talented students and top faculty is increasingly competitive.

ADVANCING UNC

Like our pioneering founders, our fundamental mission to provide accessible, high-quality education at UNC will not be compromised. As an academic enterprise, we're committed to making strategic investments that are both fiscally responsible and sustainable. We've already begun the hard work, and now, we're asking you to join us.



OUR GOAL: \$45 MILLION

OUR PRIORITIES

This first-ever comprehensive, universitywide fundraising initiative will advance the mission of UNC through five fundamental areas:



SCHOLARSHIPS: Life-Changing Support

For students and families, scholarships provide financial relief that makes college a reality, not just a dream. Scholarships also help attract students from under-represented populations and help more students complete degrees. Scholarships are also necessary to recruit talented students, helping UNC maintain excellence in academics, arts and athletics.



FACULTY DEVELOPMENT: Excellence in Teaching

Our faculty are key to the transformative educational experience at UNC. Faculty support helps UNC recruit and retain top faculty members and gives current faculty opportunities to maintain leading knowledge and innovative teaching methods.



RESEARCH: Exceptional Learning

UNC faculty connect innovative teaching with relevant research for a passionately different approach to education for our students. Support for student and faculty research helps prepare students for their future careers by giving them experience and access uncommon at other universities.



PROGRAM SUPPORT: Extraordinary Opportunity

Distinction in education includes a variety of student experiences in and out of the classroom. Support for UNC's unique array of programs helps students flourish as responsible citizens in a dynamic, diverse and global society.

	ľ
(
	∍
6	2
5	∍

CAMPUS COMMONS: Building Student Success

The new Campus Commons will house an integrated student support hub designed to help students set a clear path to graduation and eliminate barriers to success. This innovative facility will be a singular gateway to the heart of UNC, providing a central home for campus visitors and modern performance and gallery space for our world-class arts programs.

"Mainly due to declining state support, we now live in an environment where 65 percent of our operating budget comes from tuition and fee revenues."

-ROBBYN WACKER, PROVOST AND SENIOR VICE PRESIDENT FOR ACADEMIC AFFAIRS GIVE.UNCO.EDU UNC Development and Alumni Relations campaign@unco.edu (970) 351-2551



UNC alumni create strong ties between campus and the Greeley community as they create buzz and businesses around town.

PHOTOGRAPHY BY WOODY MYERS AND ROB TRUBIA



ARMANDO SILVA '10

Artist, Muralist

"All great places have people, ideas and cultures that feed into it. Being a first-generation graduate (high school and college) and Mexican immigrant has allowed me to connect with the community in a great way."

Chanter Mit DIS

ERER.



GREELEY

HIRED GUN

JUSTIN WATADA '02

Greeley Stampede General Manager

E

GREELEY

WINDMILL HOMES

"I am honored to continue the tradition of putting on the largest party of the summer while creating family memories. I look forward to seeing Greeley grow, celebrating our diversity and being proud of our Western heritage."



Greeley is the **15TH HAPPIEST CITY IN AMERICA**, according to Gallup-Healthways' Community Well-Being Index





SARAH MACQUIDDY '78

Greeley Chamber of Commerce President

"Greeley is unique. We are a large community with a small-town feel. People are engaged and willing to come to the table to get involved."



TODD DOLESHALL '01, '02 (right) GLEN COOK (left)

Co-owners, Farmer's Pantry

"Our goal is to help small farmers and producers in Weld County bring their fresh vegetables and products to the community. It's very important for us, not just for Greeley, but for the small growers and producers."





SPECIAL REPORT:

By Jaclyn Zubrzycki

STOP

THE TEACHER CRISIS IN RURAL COLORADO

Cash-strapped small districts that serve 130,000 students struggle to attract and retain educators amid a shrinking pool of candidates When Meggan Roper describes the old mining town of New Castle to people who have never visited the Western Slope, she mentions the beautiful mountains and access to camping and hiking.

SHE ALSO TELLS THEM ABOUT THE STOPLIGHT IN HER HOMETOWN: "There's just one, and it's flashing yellow. That gives you some idea."

Now a UNC senior studying elementary education, Roper hopes to return to New Castle as a student teacher next fall. Roper has fond memories of experiencing the highs and lows of teaching for the first time while shadowing a teacher in the district. "I know these people, they were my community, and I want to get back to them," she says.

US C

But even for someone raised in a small town, there are things to consider before moving to a rural area to teach. Money, for one. Roper will need to pay tuition for her student teaching while living in an area where rent isn't cheap, and even full-time teacher salaries can start under \$35,000 a year. Roper also wants to meet people — other than tourists — with whom she didn't grow up. "I have concerns about going back and living there year-round," she says.

Roper isn't alone in her reservations. Remote locations and lower salaries make it difficult to recruit and retain teachers in many rural areas. And in the last five years, fewer young people are studying education at all. That's combined to create a serious teacher shortage in rural Colorado.

"Colorado is not unique" in experiencing a teacher shortage, says Harvey Rude, a professor emeritus at UNC whose career has included studying special education and working with Navajo students. But the teacher shortage in rural areas here has reached what he described as "crisis proportions." It's hard to find applicants, and harder to find applicants who are qualified for the particular position you need, especially if that position is science, math, special education or a world language.

Rude says UNC's new Colorado Center for Rural Education will help prepare educators like Roper for the unique experiences of rural schools and support them once they're there. Still, advocates say recruiting and retaining teachers in rural areas is an ongoing challenge — and one that's not likely to be resolved without financial support.

NOT JUST A RURAL CHALLENGE

The number of public school students in Colorado has been steadily increasing for decades, while the number of new trained teachers has been moving in the opposite direction. Colorado institutes of higher education produce just half the teachers the state needs each year; many districts "import" teachers from other states.

The Colorado Department of Higher Education's assessment, in a 2016 report (see graph below), lines up with Rude's. This all amounts to a looming crisis, especially in rural Colorado.

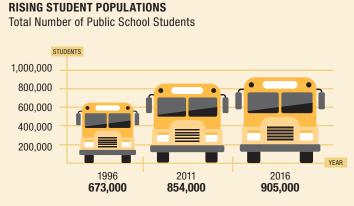
Eugene Sheehan, the dean of UNC's College of Education and Behavioral Sciences, says the overall teacher shortage is the result of a number of factors. One is the improved economy, which means people with college degrees can access more lucrative professions. Another is what he describes as a shift in society's perceptions about the teaching profession. Still another is the increased stress placed on teachers by new accountability systems and changing curricula. There are also changing expectations about how long anyone stays in any job. "The teacher shortage is affected by all of these societal things," Sheehan says.

Enrollment in teacher preparation programs has been falling around the country. But not every state, or district, has a shortage. States like Michigan and Pennsylvania produce more teachers than they need; school districts like Boulder Valley in Colorado have no problem recruiting teachers. Colorado was ranked as having one of the lowest "teacher attractiveness" ratings in the country by the Learning Policy Institute, a nonprofit focused on education research, policy and practice. The institute ranked Colorado's wages, working conditions and percentage of experienced teachers at well below the national average; the state is also more likely to have inexperienced teachers working with minority or low-income students than other states.

In rural Colorado, salaries are even lower than in the state as a whole. "We're concerned about rural districts' abilities to attract professionally prepared and high-quality teachers," says Kerrie Dahlman, the president of the Colorado Education Association.

While most Colorado students attend the state's large districts in the Front Range, 147 of the state's 178 districts are classified as "rural" or "small rural" by the state's education departments based on their distance from urban centers and their enrollment. Some 130,000 students attend rural school districts.

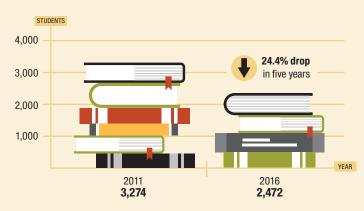
"We're by far the majority of districts," says Michelle Murphy, the executive director of the Colorado Rural Schools Alliance. But, she says, it's easy for rural issues to fly under the radar. The state's accountability system, for instance, was designed with bigger urban districts in mind.



COLORADO SHORTAGE SNAPSHOT

FEWER TEACHERS

Students Admitted to Colorado Teacher Preparation Program



Colorado Department of Higher Education

Colorado Department of Higher Education

"WE'RE CONCERNED ABOUT RURAL DISTRICTS' ABILITIES TO ATTRACT PROFESSIONALLY PREPARED AND HIGH-QUALITY TEACHERS."

-Kerrie Dahlman, president, Colorado Education Association

LOOKING FOR SOLUTIONS

More people are beginning to look for ways to recruit and retain more teachers in rural Colorado. In late 2016, UNC received a \$2.2 million grant to work with rural districts on addressing these issues, supported by new state funding. That led to the creation of the Rural Education Center.

The school has had a center for urban education for more than 15 years; the new center represents "a firm commitment that there needs to be something more substantial for rural communities," Rude says.

The project includes the "Rural Teaching Scholars" program, which provides a \$2,800 stipend for those who student teach who would consider student teaching in rural school districts; a teacher-cadet program for high schoolers interested in teaching; a Rural Teacher Leaders program that will, among other things, support and encourage rural teachers to get National Board Certification; and more professional development networks for rural teachers.

The Rural Teaching Scholars has awarded 22 stipends so far to students to teach at rural schools around the state. Meggan Roper is one of dozens of students who has applied for its second round.

ALL ABOUT THE MONEY

Rural Colorado isn't homogenous. There are quiet towns on the Eastern Plains with growing numbers of students who are learning English for the first time, welloff tourist hubs in the mountains, schools run by the Bureau of Indian Education on reservations.

But the Rural Schools Alliance's Murphy says that within that diversity, there's at least one shared challenge: money. "The idea that anything short of more money to pay our teachers is going to solve the problem is lunacy," she says. In some districts, teachers might be making just \$28,000 a year. At the same time, the cost of living is often higher than along the Front Range.

She says that districts aren't opting to spend money on things other than salaries. "It's not like we're not choosing to pay them so little; there's no wiggle room."

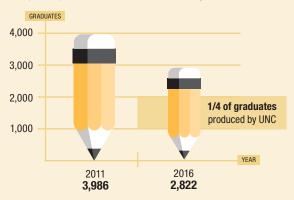
Frank Reeves was the superintendent in the 175-student district Genoa-Hugo School District in eastern Colorado. Now he's the superintendent of the East Grand School District, in the mountains just west of Boulder.

Reeves says that at Genoa-Hugo, in a more remote and agricultural area, he'd post jobs and not get a single application. The distance from Denver, and the prospect of joining a community without many young people, made it hard to recruit. He says it's particularly hard for those who are single.

In Granby, near a number of ski resorts, he says, "it's not recruitment, it's retention." His district offers a four-day school week and

UNC TEACHER PROGRAM GRADUATES

Even as fewer students enroll in teacher education, UNC produces nearly one quarter of Colorado's education graduates



RECRUIT, RETAIN TEACHERS IN RURAL SCHOOL DISTRICTS

The Colorado Department of Higher Education awarded UNC a \$2.2 million grant that will be used over the next five years to help address teacher shortages in Colorado's 147 rural school districts, especially in the high-need areas of science, mathematics, special education and cultural/linguistic diversity.

The grant establishes the Center for Rural Education, which will be led by faculty from UNC's School of Teacher Education and School of Special Education.

THE CENTER WILL:

- Develop or expand teacher cadet academies that encourage rural middle and high school students to consider teaching as a career
- Provide financial incentives for teacher candidates in pre-service teacher preparation programs who commit to student teach or teach in rural Colorado school districts
- Provide mentoring and professional development support for beginning teachers in rural districts
- Supply stipends to rural teachers who commit to obtain concurrent enrollment certification or national board teaching certification

Colorado Department of Higher Education

some free skiing for teachers. But he says that the cost of living is so high that it's hard to keep teachers for long. He recently offered two teachers jobs with salaries around \$35,000 a year; both had master's degrees. The cheapest rent in Granby is \$1,000 a month.

"Kids should have the same opportunities to gain the education they need to be successful in life," he says. "If a school can't hire or keep a math teacher, because of its size or because of the amount of money it has, then that kid is at a disadvantage.

"There's not a level playing field and you don't know how to create it. But it'd go a long way if you could offer a salary that even looked competitive with the Front Range."

Some areas, including Aspen, have raised local taxes, but in other cases proposed mill levy increases to raise salaries at the local level have failed. Murphy argues that a more comprehensive solution needs to come from the state.

In the meantime, some school districts have gotten creative. In Eagle County, the district has considered building tiny houses for teachers. In Grand County, Reeves has wondered if there's a way to somehow take advantage of vacation houses that sit vacant for much of the year. Students in the Custer County district are in the midst of building four new apartments for teachers in the town of Westcliffe.

The district has also begun to modernize its recruitment. Mark Payler, the district's superintendent, introduced online recruiting (to replace paper applications) just last year. He pitches potential applicants on the flexibility and autonomy possible in a small district, on the ability to make a difference, and on Custer County's wonderful views of the Sangre de Cristo Mountains.

Other educational organizations have also tried to tackle the issue. Colorado State University-Pueblo has an effort to bring more new teachers to rural Colorado; another university offers field trips to rural districts; a separate effort through the Northwest BOCES (a collaborative of rural districts) asks students to teach for a few years in the rural northeast in exchange for a guarantee that they can eventually end up in the Boulder Valley School District (There haven't been any takers on that one yet.)

"I think the efforts and incentives are all important," says the Rural Schools Alliances' Murphy. "I'd feel embraced by a community that built me a home." But, she says, that won't make a difference "if we don't get our salaries up to par with other jobs for kids coming out of school with degrees and debt."

RETURNING HOME

While the financial and social challenges in rural Colorado are real, Sheehan says it's important not to forget about or ignore the reasons people go into teaching in the first place. It can be a profoundly satisfying, rewarding and independent career. Of the nation's many school kids and teachers, he says, "most go home every day feeling good about themselves."

"You're seeing progress, you're seeing kids have an experience— there's an immediate reinforcement that people don't talk about, that you can only experience," he says.

That's what drew Roper to teaching. A first-generation college student, she's had people tell her teaching will be hard, or that she won't make much money. "I'm passionate about learning," she says.

When she was a young person in a rural district, she says, "some teachers would be there for a year, or not even a full year, and a lot of times it was by their choice." She recalls one teacher moving to the Front Range.

But other teachers stuck around for the long haul, and those relationships were invaluable. "They knew who you were, they knew how to push you and help you succeed," she says. "It was kind of fantastic." **UNC**

ENCOURAGING POTENTIAL

Nearly 400 high school students attended a UNC conference for future teachers Feb. 24 — an increase of nearly 350 students since the annual event began just two years ago.

The conference offers the opportunity for students to learn more about teaching in specific areas, including early childhood and secondary education, special education, urban education and educational psychology. Sessions were led by UNC faculty and current K-12 teachers in the region.

The high schoolers, many of whom are already teaching in classrooms as part of their high school's teacher cadet program, represented 70 high schools throughout Colorado. UNC works closely with teacher cadet programs and provides professional support.

The conference is just one of the ways UNC, the state's leader in preparing educators, is responding to support prospective and current teachers. UNC has also spearheaded an Early Career Network, with members composed of college teacher candidates and teachers with one to five years of experience throughout the region.

"We know that new teachers and teacher candidates persist when they feel a sense of belonging," says Suzette Youngs, co-organizer with Chris Kyser and Linda Leon, of the Future Teacher Conference and the



Early Career Network. "The goal is to bring groups of aspiring and current teachers together, creating a bridge from high school through college to the first years of teaching. The first years are a critical time in teaching and we hope our conference and network provides the support teachers need to succeed."

A state of the state of the



THE SCHOOL OF MUSIC WELCOMES A BLUEGRASS AND FOLK PROGRAM TO ITS NOTABLE CIRCLE, CREATING SPACE FOR A DIVERSE SOUNDSCAPE ancy Padilla recalls her daughter, Natalie, at age 2 watching her on stage and pretending to play the fiddle with a couple of sticks.

Natalie doesn't remember that. She doesn't remember much about those first few years when she played the fiddle.

But that moment was important because it confirmed what Nancy hoped: Natalie was born to play music. Nancy, a professional musician, began to teach her daughter Texas-style fiddle.

When Natalie was 6, she was named the Montana State Pee Wee Fiddle Champion. She won many titles as a kid, and in high school, and she began to think about a career in music. She came to UNC as an undergraduate and graduated with a music degree in violin performance in 2011—with the goal to become a violin professor and teach at a university.

So when Michael Alexander, director of UNC's School of Music, called her a year ago to ask her about teaching for a new program, it was a step toward her dream—but on a slightly different path. She's returning to UNC this fall to teach violin, but it won't be in classical music. She and four other faculty members will teach folk and bluegrass.

The decision to bring bluegrass to UNC caused a stir, especially given the School of Music's national and international profile. UNC is now going to be one of the few public universities to allow musicians to focus on mandolin, fiddle, folk bass, flatpick guitar or banjo as a primary instrument.

But the idea is for UNC to expand beyond the three traditional disciplines of band, orchestra or choir. UNC, Alexander says, should be looking for outstanding musicians regardless of the genre in which they are making music. "We support great music and art in

<u>reclosos</u>

FOLK AND BLUEGRASS STUDIES FACULTY

Martin Gilmore, Guitar Natalie Padilla, Fiddle Jordan Ramsey, Mandolin Dusty Rider, Banjo Eric Thorin, Bass

THE SWEET SOUNDS OF A NEW PROGRAM AT UNC

Watch the program faculty jam: vimeo.com/200038301

For more program information: arts.unco.edu/ music/bluegrass

OTHER NEW PROGRAMS AT UNC

- Master's degree in Foundations of Professional Psychology. The 30-credit program will be only for students admitted to the Ph.D. School Psychology program. Students admitted to the Ph.D. program will complete the master's degree early in the doctoral program and then continue on with the Ph.D. requirements.
- Master's degree in Dietetics to provide registered dietitians with the opportunity to earn a master's degree. For nonregistered dietitians who have a bachelor's degree in dietetics, the M.S. in Dietetics with Dietetic Internship will put them on the path to become registered dietitians in addition to earning the graduate degree.



See all of the undergraduate and graduate programs UNC offers at unco.edu/programs



whatever form it manifests itself," he says. "Bluegrass is a piece of the musical heritage of our country. We should honor it as a university, particularly when there is a thriving folk and bluegrass scene in our region."

The offering isn't as divergent as it appears. Although the bluegrass tradition is largely taught by ear, the students will still earn degrees in one of the school's existing degree tracks. There are five part-time bluegrass faculty members, but there are 70 faculty in the

School of Music. Some of the best music schools in the country, including Berklee College of Music, have already embraced bluegrass.

"This program offers a unique opportunity for students to be involved in many styles," Padilla explains. "Most people find that bluegrass and folk music is way harder than it seems at first, and even more difficult to execute effectively."

Alexander is hoping the new program raises the level of musicianship across the school. "I think it provides for a more musically diverse place," Alexander says. "I hope that our classically trained students improvise and fiddle, and I hope our fiddlers can play the printed page."

Padilla's repertoire reflects that diversity. She plays as the associate concertmaster for the Greeley Philharmonic Orchestra, and she also founded a modern acoustic bluegrass band, Masontown. When she came to UNC, she spent a lot of her time playing Irish music with Blayne Chastain, the music director for St. Patrick Presbyterian Church in Greeley. She also released a solo album this spring. She calls her own music a mix between Irish, bluegrass and oldtime. She's passionate about writing original music inspired by these styles.

"That's my happy place," Padilla says. "I love taking a tune and making it my own."

That diversity will serve her well as the fiddle instructor at UNC. She says the life of a modern musician isn't about one steady gig. You have to be a business person, and a promoter. It helps, too, to be able to play all kinds of music. That's why Padilla doesn't see a huge difference between teaching bluegrass or more traditional

"BLUEGRASS IS A PIECE OF THE MUSICAL HERITAGE OF OUR COUNTRY. WE SHOULD HONOR IT AS A UNIVERSITY, PARTICULARLY WHEN THERE IS A THRIVING FOLK AND BLUEGRASS SCENE IN OUR REGION."

-Michael Alexander, School of Music director

classical music lessons, and she continues to teach both privately.

Technique is a serious piece of any lesson, she says, and getting a good sound from a fiddle or a violin—and there is no real difference between the two—is more than half the battle.

"You're teaching someone how to practice in your lessons," Padilla says. "I don't think that should be wildly different from style to style."

Before she starts a first lesson with new students, she asks a question: What is your goal? Then she tailors her instruction to the answer. That's partly why she loves teaching.

"I really love sharing music," Padilla says. "When you get to the point where they really enjoy it and can share and express what they love, that's the most rewarding thing as a teacher."

Of course, she will teach her UNC students how to hold their own in a jam session and play in one of UNC's bluegrass ensembles. "Simply taking lessons, learning tunes, and playing these unique styles with others will prepare and teach students the deep traditions of this style," she says. When they leave UNC, they will be ready to go out and book gigs of their own. But along the way, if Padilla has her way, they will become better players, period.

"I'm not going to make them focus exclusively on bluegrass," Padilla says. "If there's something else to study, I'll be open to it. I think that's the unique thing about a new program. I don't know how it will work. It doesn't exist yet."

But it will this fall, as UNC welcomes students to the new program.

"I've always wanted to teach at a university level," Padilla says, "Not only do I get to fulfill that dream, but now I'll be teaching the music I'm most passionate about." UNC



THE NEXT CHAPTER OF =YBA

By Nate Haas '04

UNC PROFESSOR OFFERS HIS SPORTS-SCIENCE RESEARCH TO MAJOR LEAGUE BASEBALL TO HELP PROJECT THE NEXT GREAT PLAYER

umbers crunchers rejoiced when bestselling-book-turned-Hollywood-movie Moneyball pulled back the curtain on a majorleague baseball team's use of undervalued analytics to identify players to covet.

Since being pioneered by Billy Beane — the Oakland A's general manager who became a household name after Brad Pitt's portrayal of him in the biopic—the practice of selecting players based on once-overlooked data is no longer a novelty.

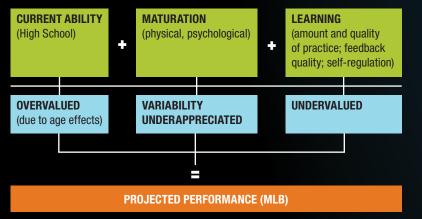
UNC Professor Bob Brustad attests to this. A friend of his works with the Tampa Bay Rays, which now employs 11 full-time analytics gurus.

"Teams see the value in this approach," he says. "It drives every part of the decision-making process."

In a way, Brustad is working on the next chapter of Moneyball. His sports-science research is largely an untapped resource among teams.

THE "PREDICTION EQUATION" IS INAPPROPRIATELY WEIGHTED

CURRENT PREDICTION EQUATION



WHICH PLAYERS WILL OUTPERFORM THEIR TALENT PROJECTION?

DURING HIS PRESENTATION AT THE MAJOR LEAGUE BASEBALL CONFERENCE, BRUSTAD SAID THESE ARE VARIABLES TO CONSIDER BASED ON THE DATA HE ANALYZED:



PHYSICAL GROWTH

"Players who are going to grow the most from the time they get drafted until they play at their major-league age," Brustad says. "When a player reaches maximum rate of growth tells you a lot about growth potential past that point." Body type is also helpful in predicting ultimate growth.

With a background in sport and exercise science, Brustad intends to fill that void. In 2016, he presented his initial findings at Major League Baseball's annual analytics conference, attended by over 300 front-office personnel and scouts.

His presentation, focusing on talent-projection errors based on players' ages when they were drafted, led to at least three teams expressing interest in working with Brustad.

"I believe the prediction equation we use in projecting talent is wrong—not fatally wrong, but it's distorted," Brustad said during his presentation.

An aficionado of the game, Brustad wants to help teams project the success of players they're considering, but he also seeks to improve sports at all levels for athletes, coaches and families.

STUDENT OF THE GAME

Brustad learned math from his father, a mathematician and a sabermetrics disciple long before

Beane and *Moneyball* made it de rigueur. He recalls his father's love of statistics and projecting outcomes of games, especially for college football's venerable Rose Bowl.

"He would calculate score-point differentials based on common opponents of common opponents of common opponents," Brustad says.

It will come as no surprise then that Brustad's first lessons involved learning how to figure batting averages.

That kindled what has become a lifelong passion for baseball.

His research background in how player development and sports psychology affect success puts him squarely on the path of his current focus.

THE STUDY

Brustad reviewed widely available draft data of high school players from the first 20 rounds from 2005-12 to look at how age influences the probability of being selected in the draft. He set out with the expectation that younger high school players might provide greater value in the long run.

In his presentation at the MLB conference, two players drafted in 2007 served as Exhibit A and Exhibit B.

The first, a 19-year-old "can't-miss prospect" who was drafted in the first round by the St. Louis Cardinals. And the second, an 18-year-old pitcher taken in the later rounds by the Colorado Rockies.

The anecdotes serve as a cautionary tale for teams and support the initial results of the study.

The Cardinals' pick, Pete Kozma, showcased his dominance as an older high school player who had accumulated more practice time. A top 20 prospect, he played two years for St. Louis before being optioned to the minors. He's now a backup infielder with the New York Yankees.

On the other hand, the Rockies' pick, Chris Sale, received much less fanfare, ranking outside the top 1,000 prospects in the draft class. His fastball, a key measure teams use in draft analysis, reached 86 mph (over 8 mph below the average of a major-league pitcher). Brustad says that not only was Sale young for his age group, but he also had a less mature body type and he focused more on basketball in high school. After opting to go to college, he was re-drafted in 2010 by the Chicago White Sox as the 13th overall pick. Last year he made the All-Star team.

Sale clearly outperformed his talent projection from the 2007 draft, and Brustad says he's an example of the importance of taking growth and maturational development into analysis.

"WHAT WE HAVE IS A SITUATION WHERE CURRENT ABILITY IS OVERVALUED. WE'RE MISSING A LOT IN TERMS OF BRINGING IN THE MATURATIONAL, LEARNING CHARACTERISTICS INTO OUR PROJECTION SYSTEM."

GROWTH CHARACTERISTICS

"For pitchers what we want to see is... the physical development and change in limb length in particular," Brustad says. "Players who have the greatest growth would be the ones who would seem to have the greatest potential for change over time." As for position players, "we're looking at power more than anything else. ... we're looking at strength."



LEARNING

"Some players are simply going to learn more than others," Brustad says. "Learning corresponds a lot to practice history so the more quality practice a person has had, the less learning potential they have. The less specialized the athlete was at a younger age, the steeper the learning trajectory would logically be." Other individual differences that affect learning would include the player's adaptability and receptiveness to feedback.



PSYCHOLOGICAL MATURATION

"Some athletes are more capable of psychological regulation, in terms of emotional control, self-regulation, etc. than others," Brustad says. "That's going to play a role because baseball is a game of frustration ... it's a very psychologically demanding process."

"Hidden Gold on the Diamond? The Contribution of the Relative Age Effect to Talent Estimation Errors of High School Players in the June MLB Draft" by Robert Brustad

"It's remarkable how much growth can take place between ages 17½ and 18½," Brustad says. "The more specialized player looks better now, but he's closer to his ceiling. The players getting greater attention are more likely to be early maturers who have less growth potential."

When he factored in a statistic known as WAR, a formula for projecting the number of wins a team has with a specific player in the lineup as opposed to a replacement, Brustad discovered that many of the top 20 players in today's game were drafted as 17-year-olds.

In general, Brustad's research shows that teams overvalue players' current ability.

"It's a tendency we see across all sports that we make some fundamental errors in the talent evaluation process because we neglect the importance of age, maturity and practice," Brustad says.

"We're missing a lot in terms of bringing in the maturational, learning characteristics into our projection system."

Some players, like Washington Nationals' ace pitcher Stephen Strasburg, considered to be one of the game's greatest pitching prospects, aren't even drafted in high school. Worse yet, the risk remains for teams to completely miss major-league talent because a player can be near the beginning of the development curve at age 17.

More work needs to be done, but Brustad allows this: all things being equal, if a team has a choice between a younger draft pick or an older one, the choice is clear.

WHAT'S NEXT

Brustad wants to expand the draft analysis another 5-10 years and explore other related factors in a player's development. Specifically, he intends to focus on sport specialization and maturity. If he can get his hands on retrospective data — showing the age when a player reaches physical maturity — he'll be able to make even more accurate projections for their growth potential.

"Equations can be developed to predict who has the

"THERE'S SOME EVIDENCE THAT A MULTISPORT BACKGROUND PAYS BIG DIVIDENDS IN LEARNING AND INJURY PREVENTION."

greatest physical growth potential based on height and weight and somatotype (body type) way back when," Brustad says.

As for specialization, his hypothesis is that the more a player focuses on one sport growing up, the more likely that player is closer to maxing out at the growth ceiling.

"There's some evidence that a multisport background pays big dividends in learning and injury prevention," Brustad says, noting that research around that would help all athletes, families and coaches.

Already a consultant with the U.S. Olympic Committee and the Real Sociedad professional soccer team in Spain—where he travels to advise on player development for the team's 13- to 16-year-old division—Brustad could be helping an MLB team in the near future with his *Moneyball* 2.0 approach. UNC

BLUE & GOLD

JIM ALEXANDER '69

"The accounting degree came along with classes in business law, management, marketing, economics — I felt like I had a very good background to start a business of my own. One of the biggest rewards of being in the roofing business in Aspen is I've gotten enough financial reward to really pursue my passions, primarily helping under-privileged people in third-world countries."

TIMOTHY K. BRADLEY '80

"The students from UNC have made a real mark in the world, and we need to continue that. We, as alumni, have a responsibility to make sure that, as this university goes from being publicly funded to being privately funded, we give the next generation — the future generations of the school — an opportunity to be as successful and to get as much out of an education as we did."

HONORED ALUMNI Induction Ceremony

BRUCE PEARSON '69

"When you walk on a college campus, the first thing you see are the buildings; the bricks and the mortar, and, of course, UNC has a lovely environment in Greeley. However, what really makes a university are the people — the college professors, your friends — and I'd like to thank my college professors for pouring their life into me."

FRITZ J. ERICKSON '84, '87

"When you think of a university, it has several key stakeholders; certainly the students are at the forefront, terrific faculty, caring staff — but alumni carry the message of what a university really is, and what its impact is. We all have an obligation to do everything we can to impact the lives of those students, because if we do, they'll have the chance to have the same opportunities that we've had, and they'll have an opportunity to really impact the lives of others." The University of Northern Colorado boasts outstanding alumni and dedicated friends from all walks of life, and each year the UNC Alumni Association recognizes some of them with the Honored Alumni Awards. We asked this year's honorees and their nominators how UNC impacted their lives and how alumni and friends can add to the university's value and advance its mission.



BOB HEINY, HONORARY ALUMNUS

(Posthumously)

Richard Grassl, professor emeritus and friend of Bob Heiny:

"I think Bob Heiny lived his entire life as if it were a bucket list. He didn't have a list, he just did things that made him happy, and that was his dedication to students – probably his highest point of a bucket list. He was student-oriented, and the most amazing part was he taught for four-and-a-half decades and he never lost his enthusiasm, right up to the end."

To read more about current and past honorees and watch each honoree's tribute video, visit unco.edu/alumni

Alumni Notes

Editor's Note: Alumni Notes items are submitted by alumni and are not verified by the editors. While we welcome alumni news, *UNC Magazine* is not responsible for the information contained in these submissions.

Submit Alumni Notes online at unco.edu/uncmagazine

60s

Marion Siebert Jensen (BA '64), Broomfield, published *A Place to Call Home.*

David L. King (BA '65, MA '70), Del Mar, Calif., returned from his third humanitarian trip to Africa where he painted a mural for the Joy to the World Kindergarten in Namibia. His previous visits to Africa have included Namibia and Maseno, Kenya.

G. William "Bill" Yeagle (MA '65), Butte, Mont., was inducted into the Montana Tech 2016 Hall of Fame class.

J. Rod Summitt (BA '68), Colorado Springs, has a new publisher and website. He is working on three novels, all of which are set in a fictional area of Colorado.

70s

Fred G. Waiss (BA '72), Prairie Du Chien, Wis., has published his first book. Just Lucky, Book 1:

Follow along on Twitter @UNCBearsAlumni to read more alumni news and notes

Friends and Enemies is set at UNC in the 1970s. Book 2 is set to be published in 2017.

Linda (Dumler) Scott (BS '73), Centennial, retired after 43 years of nursing, including 16 years as a pediatric nurse practitioner.

AI Daher (BA '75), Syracuse, N.Y., has received the Izaak Walton League (IWL) of America Honor Roll Award in recognition of his outstanding work performed in the field of conservation, public information and publicity. As a member of the IWL, Daher partnered with organizations from the public and private sector to help provide awareness about the history and reclamation of Onondaga Lake in Syracuse. He produced three films in the past 10 years highlighting Onondaga Lake as a recreational destination. Daher and his two brothers operate Mickey's Bait and Tackle of North Syracuse.

Steven R. Helling (BA '75), Colorado Springs, was appointed to the Colorado Springs Independent Ethics Commission for a three-year term.



Band of Brothers

World War II "Band of Brothers" hero

Edward Tipper died at the age of 95. Tipper, who was featured in the book and HBO war series, earned his master's degree from UNC, then Colorado State College of Education, following the war. He transitioned from military to civilian service and spent nearly 30 years as an educator in Iowa and Colorado. The public memorial ceremony will be held June 1, 2017, in Lakewood.



RECONNECT WITH YOUR UNIVERSITY THIS FALL FOR UNC HOMECOMING!

Doug Weller (BA '78), Lawrence, Kan., was named editorial design director of *B Magazine*, a quarterly publication of B the Change Media in Lawrence. (bthechange.com)

80s

Joanna "Jody" Fowler (BAE '88), Eureka, Mo., was honored among 100 St. Louis-area educators to receive an Emerson Excellence in Teaching Award. The award pays tribute to area educators for their achievements and dedication to the field of education.

Julie Smart (Ph.D. '88), Logan, Utah, was presented with a 2016 Distinguished Career in Rehabilitation Education award by the National Council on Rehabilitation Education and is writing a book titled *A Disability Primer for Counselors.*

90s

Lisa K. Hoy (BA '90), Huntington Beach, Calif., has taught first grade for 24 years. She recently returned from teaching internationally in Doha, Qatar, and Shanghai, China. She currently is working for the Orange Unified School District.

Gregory B. Elder (BA '95), Adamstown, Pa., is currently the chief historian of the Defense Intelligence Agency. Elder previously served as the deputy defense intelligence officer for Homeland Defense, president's daily briefing briefer and division senior intelligence analyst.

Jenifer Furda (BS '97, MA '00), Colorado Springs, has been named chief operating officer at the National Cybersecurity Center, a nonprofit organization providing collaborative cybersecurity knowledge and services to the nation.

Janice Sinden (BA '97), Denver, was appointed to the UNC Board of Trustees by Colorado Governor John Hickenlooper.



Alumnae test friendship with 'Friend or Faux'

"It's not how many friends we have, but how well we know them," states the slogan of a new card game developed by alumnae Colleen Stalwick, Chrissy Fagerholt, Jodi Sagastume and Melissa Derby. The trio put their friendship to the test when they created the personally revealing card game "Friend or Faux."

Initially designed two years ago, the game has undergone different iterations based on the group's testing and received a strong reception during the Chicago Toy and Game Fair. The group recently formed Easily Amused Productions LLC as the game's maker and launched a kick-starter campaign in April.

For more information about the game, go to playfriendorfaux.com

Mailbag 🗠

Excerpts from your letters:

I was very impressed with your Fall/Winter 2016 magazine and in particular the "Success Looks Like Them" section. Actually all the articles that focus on how the UNC students have applied their education to advance their field of work really hits the essence of the importance and applicability of getting that education. UNC should be very proud of the success of their students. The articles also give inspiration and hope to students and parents that the education will produce success in career fields. Its relevance is important.

-Sandra Tomasovich, parent of graduate

Writing to you regarding the article that was in the Fall/Winter 2016 UNC Magazine, "Drawing on Hard Work," featuring Sieger Hartgers and his artwork. Many of the things he said in the article I like and admire: Keep it simple, honest; don't make it an intellectual conquest; follow your bliss is more important than anything else. His love of teaching and his every action came through in the article. Doing different medias keeps me from being still and lazy. Try to live every day. I am in my early 80s and still like to draw, paint, design and print. Again, I really enjoyed the article in the magazine.

-Terence G. Peacock (MA '63)

To share your thoughts regarding *UNC Magazine* articles, please email UNCmagazine@unco.edu

00s

Autumn (Hurlbert) Norman (BA '02), Bozeman, Mont., has been cast as Portia in the first national tour of the musical *Something Rotten*.

Douglas T. Owens (DA '03), Norfolk, Va., became the chairperson of the Old Dominion University Department of Music in June 2016. He continues to teach undergraduate and graduate music education courses and directs the ODU Jazz Orchestra.

Ryan R. Johnson (BS '09), Colorado Springs, was promoted to the position of director of corporate gifts by USA Wrestling, the national governing body for wrestling in the United States.

Joshua Prewett (BME '09), Colorado Springs, was named the new district manager of the Band and Orchestral Division at Yamaha Corporation of America following seven years working in education and the music industry. In 2015, Prewett was named Music & Arts Education Representative of the Year.

10s

Cody T. Havard (Ph.D. '11), Collierville, Tenn., is an assistant professor of Sport Commerce in the Kemmons Wilson School of Hospitality and Resort Management at the University of Memphis and was named co-editor of the *Journal of Amateur Sport* effective July 1. Havard researches rivalry in sport and has developed the Sport Rivalry Fan Perception Scale (SRFPS) and identified Glory Out of Reflected Failure (GORFing).

Justin Hicks (BM '11), Watertown, Mass., is recording video game soundtracks and singing on stage.

Cashelle Butler (BA '14), Denver, will perform in the national tour of *Mama Mia* at Greeley's Union Colony Civic Center in April.

Teya Patt (BA '10), Seattle, Wash., recently appeared as a guest star on an episode of the ABC TV sitcom *Fresh Off the Boat.* Patt was also cast in a film titled *Holly Star,* which was written and directed by Michael Nickels and produced by Ed Burns.

Stephanie V. Woolman (BS '16), Greeley, was commissioned as second lieutenant in the United States Air Force.

Ah, Well I Remember...

In spring 1967, Jackson Field was one of the busiest places on campus as the home field of the Bears' baseball team. Their winning record pulled in crowds for every game.

That year, the Bears would win their 24th straight Rocky Mountain Athletic Conference title and would again go to the playoffs.

The major reason for the outstanding record was coach Pete Butler.

A tough, dedicated and wily baseball coach, Butler recruited well because of his



PHOTO COURTESY OF LINC ARCHIVES

success, and his teams went to the NCAA playoffs 13 times. After retirement, he was named to the National Collegiate Baseball Hall of Fame. He died in 2006. Butler-Hancock Hall on the UNC campus was named for Pete and for John Hancock, the wrestling coach.

But it was Pete's tough reputation both on the playing field and in the classroom that made for great talk around campus.

I was in one of his statistic classes in Gunter Hall, but I got to know Pete Butler a little better than most students that year because I was sports editor on the *Mirror* newspaper staff. I interviewed Pete several times and learned he wasn't quite the grouch that his reputation hung on him.

Until a game in April 1967. Just before the game, Pete found out his center field scorekeeper was sick. He asked if I could take his place. It paid something like \$2.50 for the game, so I accepted.

My job was to stand by the center field scoreboard, and at the end of each inning, hang the number of runs scored. There was no electronic scoreboard. There were pegs on the scoreboard, and each number was on a plank that I would hang on the pegs.

All went well until about the fifth inning, when the Bears scored 10 runs. They didn't have any board with two numbers on them, so I just took a "1" and a "0" and hung each by one peg. They overlapped each other, but I couldn't think of what else I could do.

Then I saw him. One of the players for CSC jumped out of the dugout and came running around the edge of the field. He was running fast, and didn't take long to get out to me at the scoreboard.

He was out of breath.

(Puff, puff, puff) The player was trying to talk and catch his breath. "Pete says," (Puff, puff, puff) "to get your head out of your ass."

(Puff, puff, puff), and he ran back to the dugout. (The acceptable practice was to change the board to nine and add a run in the next inning.)

And that's my greatest memory of Pete Butler. Some things just make you proud.

-Mike Peters '68

In Memory

1930s

Textie Christina (Armatage) Barber LC '32, LC '36 Luella J. (Westbrook) Anderson BA

1940s

R. Murray Thomas BA '43, MA '44 Ida M. Vaughn BA '44 Eugene "Gene" Moeny BA '47, MA '48 Lester Gene Hatfield AM '48 Donald K. Poush BA '48, MA '49 Lowry Mallory III BA '48 Alyce M. Combs BA '49 Patricia "Pat" Ione (Carmine) Russell MA '49

1950s

Herman Geisenbrock, Jr. MA '50 Edward Tipper MA '50 Virginia C. Greenwalt BA '51 Vernice A. Baird BA '52 Doris Keller Olson MA '52 Dale L. Tedford BA '52, MA '59, Ed.D. '71 Phyllis Jean (Winkle) Chance BA '53 Thomas N. Hopper BA '53 Art Stephens BA '53 Hazel Alps BA '54 David Basil Fluaitt MA '54 Dennis J. Frvdendall BA '54, MA '55, Ed.D. '72 Donna M. Cameron BA '55 Anna LeVerne Milner BA '55 Herbert Neal Wigley MA '55 Lucille Setsuko Yashumichi Sameshima BA '55 Bradford J. Clark MA '56 Virginia Ann Shaw-Taylor BA '56 William "Bill" S. Arbogast MA '57 George C. Sampson MA '57 Sally A. (Vance) Schmitz BS '57 Elwyn "Al" R. Alber BA '58 Bert E. Frink BA '58, MA '66 Cleburne "Hap" Gilliland Ed.D. '58 Samuel "Sam" or "Bud" A. Hendricks BA '58, MA '61 Alan Lee Jacobsen BA '58, MA '60 James Albert Lane BA '58 Dorothy D. Perry BA '58 Ronald "Ron" N. Veburg MA '58 Don Woods MA '58, Ed.D. '74 Tommy Airhart MA '59 Janet Lee (Flint) Cox BA '59 Lois Irene Shelton BA '59

1960s

Russell M. Eacker BA '60, MA '61 Emily Roitz Cimino BA '60 Gerald LeRoy Amsberry BA '61 Terry J. Cyprian BA '61, MA '67 Esther B. Neal BA '61 Clarence Vernon "Vern" Siegner Ed.D. '61 De Lance "De L" Viers BA '61 Barbara R. Wasmundt BA '61 Elroy John Condit Ed.D. '62 Lana Cribbs BA '62 Dale Hohstein MA '62 Jim W. Lochner BA '62. Ed.D. '69 Vay Lousberg BA '62 Donnis J. Schmitt MA '62 Donald E. Dandrea BA '63 Carl D. Knepper MA '63 Joan L. (Hedge) McCue MA '63 Jean Kathryn McPherson BA '63 Dr. Bernard B. Baros BA '64, MA '70 Roscoe M. Booth Jr. Ed.D. '64 Lillie Erwin MA '64 Zenas "Zeke" A. Prust Ed.D. '64 Douglas F. DeWitt MA '65 Ruth A. Gartrell BA '65, MA '71 Jim (Kurlev) Keelan BA '65 Paul E. Miller MA '65 Jerald Joe Hinton Ed.D. '66 Kenneth I. Lyon MA '66 Vincent Joseph Riggs BA '66 Bill W. Tillery MA '65, Ed.D. '67 Dayton Ray Turner BA '66, Ed.D. '75 Cvnthia Carroll MA '67 Richard "Dick" H. Ortli BA '67 Ida Thomas Sneath MA '67 Barbara Jean Bogard BA '68 David Eames Gledhill MA '68

Steven Charles Hafey BA '68 Beverly E. Rich MA '68 Jean Anderson BA '69, MA '88 Stephen H. Bauer BA '69 Barton W. Hultine MA '69 Kay Lynn (Svalberg) Mortimer BA '69 Ellen Marie (Von Loh) Swenson BA '69 Janet E. Timothy BSN '69 Beulah "Bea" Jean Wenkheimer BA '66

1970s

Richard B. Boland Ed.D. '70 John Benedict Diedrich BA '70 Nai-Kwang Chang Ph.D. '70 Carl Martin Floyd BA '70, MA '81 Kevin H. Grounds BS '70, MS '83 Julia "Jill" Cecile McDonough BA '70 Andrew "Andy" Nielsen MA '70 Ronald Acre MA '72 Charles Eugene Nelson MA '72 Sherry Lizotte BS '72, MA '79 Joyce D. Stacy MA '72 Barbara Havens Gangel BA '73 William J. Martens BA '73 Ann R. Sawyer Ed.D. '73 Stanley A. Fawcett Ed.D. '74 Susan M. (Collier) Maley MA '74 Everett Stewart, Sr. MA '74 Alma Rae (Benney) Greenwood Ed.D. '75 Fred Nyland Hopewell MA '75

In Memory cont. page 36



Join the new Campaign for UNC and our mission to make and advance the future of UNC. **VISIT GIVE.UNCO.EDU TO GET INVOLVED TODAY!**

In Memory cont.

Rose Mary Lucero BA '76 George D. Midgett Jr. BS '76 Thea "Bobbe" Morrison BME '76, MA '91 Craig L. Patterson BS '76 Marc Lundee BA '77 Janet Waddell MA '77, Ed.S. '89 Alice Marenta Nielsen Knapp MA '78, MA '92 Capt. William Lee Self, USN Ret. MS '78 Victoria Snowden MA '78, Ed.D. '85 Daniel Osborn Blout BA '79 John Thomas Hall BA '79

80s

Francis "Frank" B. Flahive MA '80 Samuel "Sam" N. Kladitis MA '80 Dorothy Krasovich MA '80 Philip "Corky" Carlos Lovato MS '80 Lisa Kay Erickson BA '81 William Dean Kruse Ed.D. '81 Sheila J. Toomey MA '81 Barbara R. Geiser Beck MM '82 Jack Eugene Harmon MA '82 Mark Michael Albrecht BS '83 Deanna Lynn Carter BA '83 Jean B. Moody MA '84 Kurt Garland BAE '88 Jan Louise Goodrich MA '88 Sister Elizabeth Ann Schmidt MS '88

90s

Cherie K. Hayes MA '90 Michele Rae Jurs BA '90 Michael M. Palmer BAE '90 Janet Reneè Hodgin-Hartlove BA '91 Kimberly M (Guy) O'Connor BAE '91 Joanne Layne Moon MA '93 Gregory "Greg" L. Schooley BA '94, MA '97 Debra "Debbie" L. (Sanderson) Elwess BS '96 Chad V. Ruf BS '96 Michael Buckles BA '98 Juan C. Vallejos BA '98, MA '11

10s

Harry D. Maxwell BA '11 Cody L. Van Doren BA '13

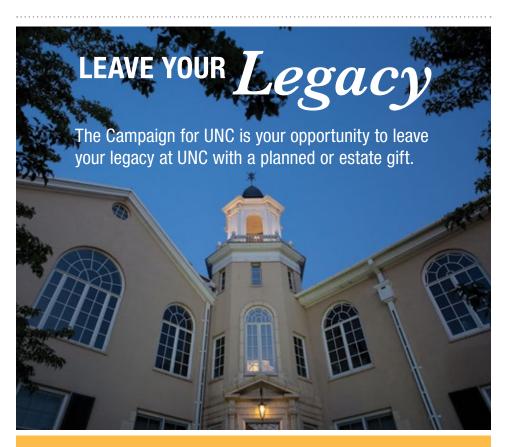
TRIBUTES

Frank Carbajal (BA '61) Fresno, Calif., died Sept. 29, 2016, at his home, surrounded by his family. Carbajal was a member of the Colorado Sports Hall of Fame, the UNC Hall of Fame, the Santa Barbara City College Hall of Fame and the California Basketball Hall of Fame. A Greeley native, Carbajal competed in men's basketball and baseball at UNC from 1958-61. He was a Division I all-region pitcher in 1960 and helped UNC to a pair of College World Series appearances.

Elmer V. Bachenberg, Denver, died Jan. 21, 2017. Bachenberg was a professor and librarian at UNC from 1964-93. He also served as the parliamentarian for Student Senate for many years, which he truly enjoyed.

John Michael Brown, Dallas, Texas, died January 2017. Brown was an English professor at UNC from 1969-98.

Lynn Teague, Conyers, Ga., daughter of J.V. and Ann Teague, died January 29, 2017. Teague established the Ann Britt Teague Memorial Scholarship for UNC nursing students in honor of her mother and oversaw the scholarship until the time of her death.



VISIT GIVE.UNCO.EDU FOR INFORMATION ON INCLUDING UNC IN YOUR ESTATE PLANS.



Last Look

Imagination Required — UNC Assistant Professor Mehrgan Mostowfi encourages his Software Engineering students to put their creativity to work.

With a master's and doctorate in computer science and engineering from the University of South Florida, Mehrgan Mostowfi says he came to UNC because of his passion for teaching, and the opportunity to work with a young, growing program.

"This is a young, dynamic program. Enrollment is growing steadily and the class sizes are kept low to provide students with the attention they deserve," he says.

It's also a growing field with great potential. "Software is now used in most aspects of our lives. Choosing a career in building software gives one the freedom to work in virtually any business or field they would like, building software for their particular needs," he says. "I also enjoy creating real things from my imagination, which is exactly what is done in this field; creating real software from an imaginary design."

Mostowfi brings his passion for this creative, vibrant process to the classroom, and he also brings his expertise as a scholar. He focuses his research on methods for reducing the energy consumption of information communication technology (ICT) systems that are parts of a computer network, including Ethernet links, network switches, desktops and laptops and web servers. "The amount of energy that ICT systems consume is high: around \$10 billion a year just in the U.S. Considering the high number of ICT systems, even a small reduction in their energy consumption has high economic impact as well as environmental benefits," he says.



ELECTRONIC SERVICE REQUESTED

Office of University Relations c/o UNC Foundation 1620 Reservoir Road Greeley, C0 80631-6900 NONPROFIT ORGANIZATION U.S. POSTAGE PAID PERMIT NO. 3280 DENVER, COLORADO

PHOTO BY WOODY MYERS

Update address at unco.edu/uncmagazine



Follow us on Instagram at unc_colorado #UNCBears

The landscape at UNC is changing with Campus Commons construction.

