Five questions for Maria Andersen[1]

The past five years have seen a rise in large-scale, digital learning experiments – centralized courses, vendor-created courseware, online homework systems, MOOCs and free-range learning platforms. By examining the research, successes and failures emerging from these experiments, what is learned about designing better digital learning experiences and technology for learning?

That’s a question that Maria Andersen, Ph.D., will take on in “Learning at Scale: Using Research to Improve Learning Practices and Technology for Teaching,” her keynote address at next month’s COLTT (Colorado Learning and Teaching with Technology) Conference.[3] This year’s edition is set for Aug. 9-10 at CU Boulder’s Wolf Law Building.

Andersen[4] is a Salt Lake City-based consultant who has spent 14 years teaching at the college level, 16 years writing curriculum and six years developing digital products for learning. She built iPad games to teach algebra, launched the Canvas Network MOOC platform, built adaptive learning platforms used by McGraw-Hill and worked as director of learning design for WGU, a fully online CBE (competency-based education) institution.

While a professor at Muskegon Community College in Michigan, she directed the weeklong MCC Math and Technology workshop for five years, helping faculty to prepare to teach online or improve their skills. Andersen is a software developer and CEO of a startup, author, speaker and a learning futurist. She holds degrees in math, chemistry, biology, business administration and higher education leadership.

1. What are the key changes you see in the role of the university instructor in the last 20 years?

The role of a university instructor used to be delivering knowledge and skills required for a course or degree program and then validating the receipt of this information through a variety of assessments. While instructors still perform these two functions, we now recognize that the learning design has a much greater impact on successful uptake than previously thought. However, few professors in higher education have been trained to pay attention to learning design. We teach how we were taught.

Professors can get smarter about improving the delivery of the learning through partnerships with instructional designers and learning researchers. We need to be teaching transferable skills, because education designed for fact-based curriculum is going to become quickly obsolete.

There is no longer a single source of authoritative content. Today’s instructor, with access to a world’s worth of resources on the internet, is more of a curator, tour guide and experience creator in their subject area. They should be designing deep conceptual and goal-driven learning experiences and letting software deliver on the task of building up a fact base.

2. If you could share one transferable lesson from learning-at-scale data to all learning environments, what would it be?

One strong lesson we see from Massive Open Online Courses (MOOCs) is that many students drop out following a completely successful run at the course, usually due to falling behind. A student will persist with on-time work and engagement for several weeks and then drop the course.

When the student falls behind in an online course they have two major obstacles to overcome: 1. Getting their life back together from whatever caused the course disruption; 2. The missed content to catch up on. This combination of circumstances appears to be insurmountable in course after course. The lesson learned, for the digital learner in particular, is the need for better strategies to help students “slip” into an alternate set of deadlines and interactions with other students.

3. How does your recent career history shape your perspective on technology for teaching?
At this point, I have been on many "sides" of educational technology: I’ve been a student user, an instructor user, an administrative user, a technology adoption decision maker, a product manager for edtech software, and now the cofounder of an edtech software company. I think having these multiple perspectives on educational technology is unusual in the industry – this makes me more likely to empathize with the end user – whether it be student or instructor – and advocate for usable, practical and delightful-to-use software.

4. What is the value of engaging students in their learning community online or otherwise?

Interaction is a highly valuable tool in our learning design toolkits. Students learn more by interacting, whether it be with content (through knowledge retrieval assessments) or with other students (explaining or asking questions). If we want concepts from one course to transfer to solving novel problems in other subject areas, students must have a chance to explore what they do or do not know – and that comes through interaction.

5. What can COLTT attendees expect to take away from your keynote?

Whether you teach in a traditional classroom or online, there are ways we can design learning more effectively to work with the chosen educational technology. Attendees should walk away with some new ideas for improving the courses they are involved in as well as feeling challenged to rethink some traditional digital practices.
awards and appointments of tenure.

Regents approve $4.11 billion budget

The CU Board of Regents on June 15 unanimously approved a budget of $4.11 billion for the 2017-18 fiscal year that begins July 1.

The total represents an increase of $173.5 million, or 4.4 percent, over the current budget year.

Revenue sources include tuition and fees, health services, government grants and contracts, auxiliary units and philanthropy. Direct funding from the state totals $211.3 million, or 5.1 percent of the total CU budget.

The budgets by campus and system administration are:
CU Boulder: $1.69 billion
UCCS: $251.5 million
CU Denver: $290.8 million
CU Anschutz Medical Campus: $1.87 billion
System administration: $157.4 million

The budget presentation by Todd Saliman, vice president and chief financial officer, lists more details.

As approved, the budget includes a 2.5 percent base-building salary increase for employees.

While the Legislature’s state budget for the coming fiscal year brought good news for CU, the current federal budget proposal raises concerns for the university. The board heard the latest on that from Tanya Kelly-Bowry, vice president for Government Relations.

She said that while proposed increases to the Department of Defense and Homeland Security would potentially benefit CU, which receives some funding in those areas, many other entities might see cuts: the National Institutes of Health, the National Science Foundation, the National Oceanic and Atmospheric Administration and the National Institute of Standards and Technology among them.

CU Anschutz Chancellor Don Elliman said the proposed NIH cuts would cost the campus an estimated $50 million, “but I think the impact would be worse than that.”

Changes to the Affordable Care Act also could result in challenges next year for the state Legislature, Kelly-Bowry said, which eventually would have an impact on funding for CU and higher education.

Board looks to streamline committee organization

The CU Board of Regents continued its progress toward reducing the number of regent committees from seven to four.

Last fall, the regents reviewed and approved the committee charters and the scope of activities to be undertaken by those committees.

At the board’s regular meeting June 15 at UCCS, Patrick O’Rourke, vice president and secretary to the board, presented the draft of the next steps, including an annualized plan they can use as a starting point to develop the work of the committees.

The four proposed committees are governance, audit (an existing committee), university affairs and finance. The tasks of current committees — athletics, laws and policies, capital construction and academic affairs — are incorporated more strategically in the new structure.
Using the current Audit Committee structure, the plans under regent review would enable members to set out an agenda to work on over the year, identify what the priorities are for the period of the committee year and be able to check off completed tasks.

“These are the major activities that we see the various committees performing on an annual basis and using that as a framework to move forward,” O’Rourke said. “This gives you the idea of what we think these committees are going to be doing, and the basis on which they’re going to be doing it.”

The board will review the documents and provide feedback by the first week in July. The feedback will be reviewed and compiled for further consideration at the board’s July retreat in Estes Park.

O’Rourke also discussed the retreat agenda with the board, including a session on “Higher Education in a VUCA (volatility, uncertainty, complexity, ambiguity) World.” The workshop will include a thorough examination into what elements of VUCA most apply at CU and how regents can be prepared to lead with stability and act with speed and flexibility. Other sessions include “Governance as Leadership, Reframing the Work of the Board,” and review and discussion of the Strategic Vision Framework. The draft agenda can be found here.

Strategic Vision Framework moves closer to completion

The CU Board of Regents last week received the first draft of the Strategic Vision Framework, a systemwide initiative that defines the future of the university system and campuses, outlines CU’s commitment to the state and identifies what sets it apart from other university systems across the country.

Regent Linda Shoemaker, D-Boulder, on Friday presented the draft at the board’s meeting at UCCS. She said the framework does not replace strategic plans already in place on the campuses, rather it aims to be simple and clear, and collaborative without being burdensome.

“The committee went out to every campus and the system to speak with the leaders about what they thought should be in our systemwide strategic vision,” she said. Overall, the committee – which also included Regents Sue Sharkey, R-Castle Rock; Irene Griego, D-Lakewood; and Glen Gallegos, R-Grand Junction – spoke with more than 100 individuals in five work sessions, she said.

Shoemaker said success will be measured by five elements of excellence: Advancing a community of health Expanding the reach of the university Harnessing technology Growing talent and leadership for the future Establishing new models for collaboration

Regent Kyle Hybl, R-Colorado Springs, said the document itself was exceptional, but lacked specifics and measurable outcomes.

“It felt to me a little bit like a promotional piece, a chamber of commerce piece,” Hybl said.

Shoemaker said the lack of specifics was intentional and that the committee felt the board needed to establish those as a whole.

“We need to look at the budget to make sure that the areas we feel are of strategic importance to the university going forward are reflected in our budget and our priorities,” she said.

Hybl suggested making the framework more instructive to the campuses.

“Then, next year as the budget comes around, we can see, ‘Are they inside the framework?’ Otherwise nobody is going to do anything with this document,” Hybl said.

Gallegos agreed, saying, “We’re not quite there yet.” He also said he would like to see diversity front and center in the
goals.

“With our guiding principles, I like the ones that are there, but what I didn’t see is one that has us becoming a model or setting an example for diversity and inclusion in the state of Colorado,” Gallegos said. “That’s a big part of our guiding principles.”

Shoemaker asked the board to review the framework and provide feedback before its retreat, July 12-14[19] at Estes Park, where the board plans to vote on adopting the document.

Interdisciplinary Studies Degree making progress[10]

Work on the three-year, fully online, intercampus bachelor’s degree in interdisciplinary studies is well underway, with an anticipated fall 2018 launch. Initiated in 2015 by Regent Stephen Ludwig, D-Denver, it will allow students to earn a bachelor’s degree in interdisciplinary studies in as few as three years.

Marjorie Levine-Clark, professor of history and associate dean for diversity, outreach and Initiatives in the College of Liberal Arts and Sciences at CU Denver and the principal investigator, said each student’s degree is made up of three foundational courses and two clusters. Foundational courses include: Introduction to Interdisciplinary Learning Interdisciplinary Experiential Learning Interdisciplinary Capstone Clusters span across CU Denver, CU Boulder and CU Colorado Springs and include: Cultural Diversity Research Methods and Data Analysis Global Studies Digital and Media Studies Environment and Sustainability Policy and Security Social Justice Studies Organizations and Leadership Professional and Technical Communication Health, Science and Society “The students choose their two clusters and construct them individually by selecting the courses within the clusters that best suit their interests,” Levine-Clark said.

Because of the vast options for the students, their degrees will enable them to be successful in myriad careers, she said.

“The range of clusters is very broad and gives students opportunities for careers in business, government, education and nonprofit work, as well as preparing them for advanced graduate and professional study,” she said.

Levine-Clark said the faculty and administrators in the program are working to get the foundational courses approved on the three campuses in fall 2017. Denver and Colorado Springs plan to have the degree approved as a “track” or “option” of already existing interdisciplinary studies degrees in the Colleges of Liberal Arts and Sciences, “so they will not have to seek new degree approval from the regents.”

Boulder is working on the degree as a joint project between Continuing Education and the School of Education. “It will be a new degree, potentially looking somewhat different than that at (UCCS and CU Denver),” Levine-Clark said.

The program update was given to the board in its June 2017 meeting packet, but was not presented at the meeting. When the syllabi are completed, the program will be marketed at the system and the campus levels, Levine-Clark said. See the update here.[21]

Sharkey takes helm of board[11][22]

Regent Sue Sharkey, R-Castle Rock, on Friday was elected chair of the CU Board of Regents.
Sharkey succeeds Regent Irene Griego, D-Lakewood, who also was nominated for chair. In a secret ballot vote, Sharkey won 5-4. Republicans hold a 5-4 majority on the board.

After the vote, Griego called her year as chair “a great experience and an honor to me.”

“I want to personally thank everybody,” she said. “I really have appreciated this opportunity, which has helped me grow as a regent, helped me understand the complexities of the Board of Regents, and get to know our president better.”

The chair leads the board’s meetings and often speaks on behalf of the board.

In recent years, the board has traditionally re-elected the sitting chair to a second consecutive one-year term. However, as Griego noted, chair elections in 2013 and 2016 required multiple votes and stretched over meetings held months apart.

Griego said she believes past regents who decided to hold a chair election annually were doing so with the idea of “building a capacity of leadership.”

“My hope is that every board member will have the opportunity to have at least one year to take on this leadership role,” she said. “I hope we continue the tradition.”

Regent Linda Shoemaker, D-Boulder, was elected vice chair, succeeding Regent Glen Gallegos, R-Grand Junction. Shoemaker was the only nominee, as Regent Stephen Ludwig, D-Denver, “respectfully declined” nomination by Regent Heidi Ganahl, R-Superior.

Regents notes: Construction projects, coach contract OK’d

The CU Board of Regents on June 15 approved program plans and/or revisions to several capital construction projects across the campuses, including:

- A new flagship aerospace facility and six others at CU Boulder
- The William J. Hybl Sports Medicine and Performance Center at UCCS
- CU Denver’s Engineering and Physical Sciences Project
- The Colorado Center for Personalized Medicine and Behavioral Health at CU Anschutz

One of the projects, the CASE (Center for Academic Success and Engagement) addition at the Euclid Avenue autopark – already underway at CU Boulder – inspired Regent John Carson, R-Highlands Ranch, to voice concerns.

“The Boulder campus, I think, is one of the three or four most beautiful campuses in America,” Carson said. “We’re putting more and more buildings in there and really compromising the beauty of the campus. … I think it’s time to take a hard look at whether we want to build more at that main Boulder campus.”

Carson said he respects the work of the board’s capital construction committee and he noted the project’s original approval came before he was a member of the board. He said he doesn’t oppose growth at the CU Boulder East Campus or Williams Village, nor is he against improvements to existing facilities at the main campus. He voted against the additional funding for the CASE building.

Regents Kyle Hybl, R-Colorado Springs, and Sue Sharkey, R-Castle Rock, were among the seven votes in favor, though both said they share Carson’s concerns about overcrowding on the main CU Boulder campus. Regent Jack Kroll, D-Denver, abstained from the vote.

In other business at the June 15-16 Board of Regents meeting at UCCS:

In an 8-0 vote on consent agenda, the board approved a contract extension for CU Boulder head football coach Mike MacIntyre. The contract has the same terms as presented to the board in February, with the exception of added language regarding training and reporting responsibilities. In a presentation by Rebecca Theobald, UCCS assistant
research professor, Geography and Environmental Studies Department and coordinator for the Colorado Geographic Alliance, regents and campus leaders stepped onto an oversized state map to hear history of the shifts in Colorado’s industries and population. The board voted to approve three new CU Boulder degrees. Full agenda items and vote results are posted at the Board of Regents' BoardDocs site.

**Regents announce conclusion of Tumpkin inquiry**

Note: An earlier version of this story first appeared as Breaking News on CU Connections on June 12.

At a special meeting June 12 at 1800 Grant St., the Board of Regents announced the conclusion of an inquiry into the University of Colorado’s handling of accusations of domestic violence by former assistant football coach Joe Tumpkin.

CU released the inquiry’s findings and President Bruce D. Benson announced the actions he will take with the unanimous support of the board.

“CU does not and will not tolerate domestic violence or any form of sexual misconduct,” President Benson wrote in a communication to the CU community. “We aim to be a national leader in addressing Title IX complaints of sexual misconduct and partner violence. This issue highlighted significant gaps in our policies and training, which we are addressing immediately.

“This is a moment of challenge and opportunity for the university, and we will be a better university as a result.”

Read clarifying statement from President Benson.
Read Board Chair Irene Griego’s remarks from the meeting here.
Read President Benson’s statement here.
Read University of Colorado Boulder Chancellor Philip P. DiStefano’s statement here.
Read CU Boulder Athletic Director Rick George’s statement here.
Read CU Boulder Head Football Coach Mike MacIntyre’s statement here.
Read the independent reports here.

**Tenure list: June 2017**

At its June 15-16 meeting at the University of Colorado Colorado Springs, the CU Board of Regents approved 77 awards and appointments of tenure.

**University of Colorado Boulder**

Tenure will take effect Aug. 21.

Awards of Tenure
Holly Barnard, Geography, College of Arts and Sciences
Tiffany Beechy, English, College of Arts and Sciences
Jordan Boyd-Graber, Computer Science, College of Engineering and Applied Science
David Brain, Astrophysical and Planetary Sciences, College of Arts and Sciences
Bor-Yuh Evan Chang, Computer Science, College of Engineering
Tenure took effect June 17.

Awards of Tenure (9)
Christopher Bell, Communication, College of Letters, Arts and Sciences
Michael L. Calvisi, Mechanical & Aerospace Engineering, College of Engineering & Applied Science
J. Jay Dawes, Health Sciences, Beth-El College of Nursing & Health Sciences
Ying Fan, College of Business
Roger L. Martinez, History, College of Letters, Arts and Sciences
Greg Oman, Mathematics, College of Letters, Arts and Sciences
Joseph W. Postell, Political Science, College of Letters, Arts and Sciences
Jeffrey Scholes, Philosophy, College of Letters, Arts and Sciences
Farida C. Khan, Economics, College of Letters, Arts, and Sciences
Kay K. Yoon, Communication, College of Letters, Arts, and Sciences

University of Colorado Denver | Anschutz Medical Campus

Unless noted, tenure took effect June 16.

Appointments with Tenure (14)
Edward Ashwood, Pathology, School of Medicine
Francisco Asturias, Biochemistry & Molecular Genetics, School of Medicine, Jan. 1, 2017
Kathleen Barnes, Medicine, School of Medicine
Scott Bauer, School of Education and Human Development, Aug. 14, 2017
Myles Cockburn, Epidemiology, Colorado School of Public Health
Kelly Doran, Immunology & Microbiology, School of Medicine, July 15, 2017
Martin Dunn, Mechanical Engineering, College of Engineering and Applied Science, Jan. 1, 2018
Nan Ellin, Urban and Regional Planning, College of Architecture and Planning, July 1, 2017
Robert Fuhlbrigge, Pediatrics, School of Medicine
Alex Horswill, Immunology & Microbiology, School of Medicine, July 1, 2017
Elizabeth Kovacs, Surgery, School of Medicine
T. Rajendra Kumar, Obstetrics & Gynecology, School of Medicine
Leigh Small, College of Nursing
Lori Sussel, Pediatrics, School of Medicine

Awards of Tenure (23)

Jimi Adams, Health & Behavioral Sciences, College of Liberal Arts and Sciences
Richard Benninger, Bioengineering, College of Engineering and Applied Science
Virginia Borges, Medicine, School of Medicine
Mark Earnest, Medicine
Todd Ely, School of Public Affairs
Jeffrey Glasheen, Medicine, School of Medicine
Eva Grayck, Pediatrics, School of Medicine
Catalin Grigoras, Music Entertainment & Industry Studies, College of Arts and Media
CU School of Medicine faculty lead 2017 class of Boettcher Investigators

University of Colorado biomedical researchers lead this year’s class of early career scientists to be named Boettcher Investigators, representatives of the state’s top institutions who will receive funding from the Boettcher Foundation’s Webb-Waring Biomedical Research Awards program.

The program supports promising, early career scientific researchers, allowing them to advance their independent research and compete for major federal and private awards in the future. Recipients are awarded $235,000 in grant funding to sustain three years of biomedical research. They also receive the title of Boettcher Investigator.

The nine-member class of 2017 includes five faculty members from the CU School of Medicine at the Anschutz Medical Campus. Their names and research areas are:

**Joshua C. Black, Ph.D.,** assistant professor of pharmacology, epigenetic regulation of tumor heterogeneity

**Angelo D’Alessandro, Ph.D.,** assistant professor of biology and molecular genetics, systemic metabolic reprogramming in health and disease

**Kristine A. Kuhn, MD, Ph.D.,** assistant professor of medicine, gut-joint lymphocyte trafficking in inflammatory bowel disease and spondyloarthritis

**Eric M. Pietras, Ph.D.,** assistant professor of medicine, hematopoietic stem cell and inflammation biology

**John A. Thompson, Ph.D.,** assistant professor of neurosurgery, neurobiology of sensory-motor driven decision-making processes

Completing the class are Colorado School of Mines’ Andrew Petruska, Ph.D.; Colorado State University’s Erin Osborne Nishimura, Ph.D., and Kelly S. Santangelo, DVM, Ph.D., Diplomate ACVP; and National Jewish Health’s Camille M. Moore, Ph.D.

“This year’s award recipients are doing important work that has the potential to significantly improve human health,” said Katie Kramer, CEO of the Boettcher Foundation. “The Boettcher Foundation is proud to help propel this research forward because Colorado can only be a leader in scientific innovation if its most dynamic scientific minds are...
supported at early stages in their work.”

Now in its eighth year, the Webb-Waring Biomedical Research Awards honor the commitments that the Webb and Waring families made to scientific research and public service.

Including this year’s class, 54 Boettcher Investigators at the state’s leading academic and research institutions have received funding through the Webb-Waring program.

CU’s 33 Boettcher Investigators[45] have been awarded over $7.6 million since the program was initiated in 2010.

“The Boettcher Investigators program reflects the best of Colorado,” said April Giles, president and CEO of Colorado BioScience Association. “We nurture talent. We grow careers. We believe in the promise of scientific research and the promise it offers to build better lives. The Boettcher Foundation and the Webb-Waring Biomedical Research Awards advance the work of talented scientists in our state.”

Two faculty members chosen for prestigious National Academy of Education fellowships[46]

Two University of Colorado faculty members have been chosen to receive prestigious fellowships from the National Academy of Education, whose competitive NAEd/Spencer Postdoctoral Fellowship program supports early career scholars working toward significant research contributions to the field of education.

From 300 applicants nationally, 30 were chosen, including:

Allison Atteberry, assistant professor, Research and Evaluation Methodology (REM) program, School of Education, University of Colorado Boulder

Luis Poza, assistant professor, Culturally and Linguistically Diverse Education, School of Education and Human Development, University of Colorado Denver

Each fellow receives $70,000 for a period of up to two years to support research proposals. The program also provides support for recipients through professional development activities with senior academy members.

Atteberry[47] will explore the effects of changes to teacher evaluation policies in recent years across the country. She will combine multiple data sources to link state-year variation in evaluation policies to outcomes that, theory suggests, should be responsive to these policy changes. Her work will create a national picture of whether changes in state-level teacher evaluation policies are associated with concurrent changes in student achievement, achievement gaps, teacher job satisfaction and teacher retention.

Poza[48] will study the challenges and opportunities of bilingual programs in gentrifying neighborhoods to identify whether community change can be leveraged to foster meaningful integration of students and families across ethnic, linguistic and class backgrounds. The study will use ethnographic methods to explore the relationships and interactional patterns in a bilingual school experiencing gentrification and engage educators and parents in a social design process to foster equity-focused approaches to pedagogy, parent engagement and school organization.

“The NAEd/Spencer Fellowship Programs not only promote important research, but also help to develop the careers of scholars who demonstrate great promise for making significant contributions to education,” said Michael Feuer, president of the NAEd.

More information on the research of Poza, Atteberry and the other recently announced fellowship recipients is available at the 2017 NAEd/Spencer Postdoctoral Fellows Page[49].
New Skillsoft interface debuts[50][51]

The new Skillsoft is here and a lot has changed, but University of Colorado faculty and staff still have access to the same resources with an upgraded interface that enhances the user experience. Plus, access has expanded to all CU students. Before diving in, learn how to navigate the new system and see what has changed.

New and enhanced features

On the new system, staff and faculty can continue taking required or instructor-led trainings, watching quick videos and reading books. As an added bonus, all CU students can utilize resources on their own time or those assigned by their professors and managers.

Available features include:
Skillsoft Courses: Courses come in a wide variety of topics, from leadership to Adobe applications. CU Custom Courses: These campus-specific courses are designed to keep employees safe and prepared on the job. Instructor Led Training (ILT): Instructor Led Training (ILT) is available through CU departments. Skillsoft Books: Over 25,500 professional development titles are available. Videos: Quick videos offer a visual approach to learning and sharing information. Job Aids: These aids offer a variety of resources that complement content presented in Skillsoft courses, so employees can continue learning even after finishing a course.

Begin mastering new skills

Experience the changes with a guided walk-through[52] and virtual tours for staff[53], faculty[54] and students[55].

To begin using Skillsoft, download directions below:
Faculty and staff[56]CU Boulder students[57]CU Denver and CU Anschutz students[58]UCCS students[59]

Feel the Heat, Move Your Feet 5K set for August[60]

Being a good runner doesn’t always come naturally. Just like with any other athletic activity, proper technique and training will improve your performance.

Many runners are preparing for the Feel the Heat, Move Your Feet 5k[61] set for Aug. 5 at Denver’s City Park. Jessica Parton, a physical therapist at Memorial Hospital in Colorado Springs, will teach one of the many Be Colorado running clinics happening throughout the summer[62], but she’s got some knowledge to share beforehand.

Sign up here for the Feel the Heat, Move Your Feet 5K[61]; more information at BeColorado.org[61].

Here’s a Q&A with Parton:

Q: What is the worst thing you see recreational runners do?

A: One of the most dangerous things I’ve seen recreational runners do is run, and only run. Similar to other sports, it’s important to include stretching and strength training in your routine.

It’s easy to get caught up in running endorphins and become overzealous with a running regimen. But placing excess demands on your body before it has a chance to adapt – by skipping stretching or neglecting strength training – can increase your risk for injury. A safe running routine should include a pre-run dynamic warm-up such as brisk walking or running drills, post-run stretching and strengthening exercises a couple times per week. Including these components in
your running routine can help improve your movement patterns, increase running performance and prevent injury.

**Q: Let’s talk about “heel striking.” Is that bad running form?**

A: Foot strike has been a popular topic in recent years, with the forefoot and mid-foot strikes gaining acceptance as more natural ways of running. Some tribal runners, unaccustomed to shoes, run with those types of form. Those foot strikes are often touted as ways to run faster, avoid injury, save energy and reduce stress. At the same time, the heel strike gained stigma, but many who adopted a forefoot strike or the minimalist shoes haven’t seen improved times and continue to be injured.

The truth is that there is no one-size-fits-all foot strike and most experts now agree that emphasis on foot strike is misplaced. Research has shown that forefoot runners and heel-strike runners can demonstrate the same running economy at various speeds. Furthermore, in biomechanical studies some heel-strikers can touch down with little to no force while some forefoot strikers pound the ground with a high amount of force.

Research now suggests that we should shift our focus up the kinetic chain to our hips and glutes where our running strides actually begin. Better running form comes from keeping posture in check by maintaining hip and core control, achieving glute engagement and avoiding over striding or reaching our legs too far forward. Over striding makes our feet land in front of our torsos, ahead of our centers of gravity.

Physical therapists are movement experts who can evaluate your functional mobility and movement patterns to home in on imbalances, weakness or inefficiencies and help you address deficits so you can become a stronger and smarter runner with less risk of injury.

**Q: Are minimal running shoes (e.g. those “toe shoes”) better for runners, as some claim?**

A: Minimal shoes and even barefoot running have received a lot of attention in conjunction with the idea that foot strike affects running form. However, there is little data to support use of minimal shoes as a training tool or treatment for injury. In fact, researchers here at the University of Colorado found that running barefoot offered no metabolic advantage over running in lightweight, cushioned shoes.

While running mechanics can be influenced by shoe traits such as midsole, stiffness or geometry, it’s important to remember that shoes don’t run, runners run. An ideal running shoe acts as a filter by offering foot protection and shock absorption while still allowing the foot to function and get important feedback, or proprioception, from the ground. Too much shoe or cushion can limit the foot’s ability to feel and interact with the terrain, but if an individual lacks foot strength or has motor control deficits, too little support or cushion could lead to excess stress or injury.

The truth is that there is no single best running shoe and selecting the optimal shoe may vary based on factors such as an individual’s body type, muscle imbalances, motor control or the type of terrain they will be running on. If you choose to transition to a minimalist shoe, it is import to transition gradually because an abrupt change can also overwhelm your body, leading to pain or injury. Incorrect footwear choices can exacerbate or cause lower extremity dysfunction, while ideal footwear can help with injury prevention or even speed healing of an injury by decreasing tissue stress on an impaired structure.

Gait analysis by a physical therapist or your local running store can help you select the proper shoe for your body type.

**Q: Is running bad for your joints?**

A: Contrary to common perceptions, no, running is not bad for your joints. In fact, current research shows that runners are no more likely to develop osteoarthritis of the knee than non-runners. Runners are also less likely to develop disability and have significantly reduced osteoarthritis and hip replacement risk. Running may actually benefit your joints by promoting increased bone density and muscular strength, while developing aerobic capacity.

The key is to run smart by understanding and maintaining proper form. Physical therapists can evaluate your functional mobility and movement patterns to help improve your running form, reduce risk of injury or return to running if you do
experience an injury.

MAVEN’s top 10 discoveries about Mars at 1,000 days[63]

Szpyrka announces retirement[64]

Peace Corps, CU Denver announce new prep program[65]

Film examines risks temp workers face[66]

CU South Denver celebrates annexation into Lone Tree[67][68]

The University of Colorado South Denver[69] (CU South Denver) on June 6 welcomed Lone Tree city officials and representatives from the University of Colorado enterprise to celebrate the recent annexation of the location into the city of Lone Tree.

Special guests at the reception in the fine arts gallery at CU South Denver included Lone Tree Mayor Jackie Millet and members of the Lone Tree City Council, City of Lone Tree Economic Development Director Jeff Holwell, CU Regent Sue Sharkey, CU Denver Chancellor Dorothy Horrell and CU South Denver Vice Chancellor Luella Chavez D’Angelo.

While the annexation took place earlier this year, the reception allowed for CU leadership and city officials to share with community members and CU staff the vision for the partnership between the higher education institution and the city.

“We are so excited about the future opportunities for collaboration with CU,” Millet said. “This relationship with a renowned higher education institution is beyond what we could have dreamed of and brings us one step closer to our goal of becoming a smart city for the 21st century and creating a model for other smart cities to follow. This partnership also elevates both the university and our city by allowing us to offer educational opportunities, cultural assets and high-quality facilities to our citizens in their own backyard.”

Working closely with a new Advisory Board consisting of south Denver community and business leaders, CU South Denver has developed market-responsive educational and cultural programming. CU South Denver is the only location within the CU enterprise to offer expertise from all four CU campuses via traditional and non-traditional applied learning experiences, including undergraduate and graduate degrees, other professional development certifications and classes, as well as educational and cultural programs for all ages and levels.

“As a leading educational hub serving south Denver communities, CU South Denver is reimagining the way the community accesses and connects through science, technology, engineering, arts and math, all infused with CU expertise,” Chavez D’Angelo said. “We are very excited to be a part of Lone Tree and work closely with Mayor Millet and her team.”
As the south Denver community continues to expand with new residential and commercial developments underway, CU South Denver will continue to work with the city of Lone Tree and its residents to develop educational programming that meets the needs of the community.

“We are honored that CU South Denver’s new address is the city of Lone Tree,” Horrell said. “As a gateway into the University of Colorado, CU South Denver serves as an educational partner for all those living or working in the south metro Denver area. Here, students of all ages, from preschoolers through retirees, come together to learn in a variety of ways: from attending a museum exhibit or a 3-D educational film to enrolling in summer camp or university classes offered by one of our four campuses. CU South Denver is uniquely positioned to meet workforce and community needs in this thriving part of our state.”

Interim title removed; Pino named police chief[70]

Hansen contributes to new international admissions book[71]

Calder, Lacerenza, Mwaffo and Resasco named 2017 Chancellor’s Postdoctoral Fellows [72]

Links
[1] https://connections.cu.edu/spotlights/five-questions-maria-andersen
[2] https://connections.cu.edu/sites/default/files/5-anderson_01.png
[5] https://connections.cu.edu/sites/default/files/5_anderson02.jpg
[10] https://connections.cu.edu/stories/interdisciplinary-studies-degree-making-progress
[16] https://connections.cu.edu/stories/regents-unanimously-approve-25-percent-salary-increases
[22] https://connections.cu.edu/sites/default/files/reg_sharkey.jpg