TEACHERS COLLEGE COLUMBIA UNIVERSITY

ANNUAL REPORT 2014

NEW DIMENSION:
THE 3-D PRINTER
IN TC'S fab lab

Thinking Outside
The Box
A year of innovation at Teachers College
President's Message: The 21st-century TC
How we're gearing up to lead, educate and innovate on fronts ranging from data-mining to digital art and design

Igniting the Spark
Since 2007, the Provost’s Investment Fund has backed 100 faculty projects, including many that have generated major external funding and collaboration

A Year of Innovation
Game-changing accomplishments by each of TC’s academic departments and leadership

Taking Our Campaign Public
We’ve got the vision and the expertise, and now our faculty and friends are mobilized. Suzanne Murphy, Vice President for Development & External Affairs, reports
But just as important as that “Aha” moment is everything that precedes it. Like the proverbial shovel breaking through the tunnel wall, sudden insight nearly always results from sustained hard work. Scraps of knowledge are accumulated through repeated trial and error; chance leads are pursued; and only then is the puzzle arranged for the final piece to fall into place.

At Teachers College, our track record of “firsts” — new ideas that have changed the world — reflects an environment dedicated to both inspiration and perseverance. As our Provost, Tom James, likes to say, we were conceived of as a skunkworks, an experimental laboratory where creative risk-taking is a way of life. As a result, we have been home to more brilliant people tunneling away on issues of teaching, learning, physical and mental health, and the leadership of organizations than any other institution in the world.

Now we are dedicating ourselves to better positioning TC as a 21st-century institution that will continue to lead, educate and innovate amid a changing technological environment and changing opportunities for professionals and scholars in the fields we serve. Our work on innovation — and all our plans for the years ahead — are supported by **Where the Future Comes First: The Campaign for Teachers College.** (See page 22 for a report on the significant progress we have made toward our Campaign goal of raising $300 million, and particularly toward our number one Campaign priority of funding scholarships for our talented students.)

Here are new approaches TC is taking to address some of the most important challenges today:

**BRILLIANT PEOPLE** The College provides an environment that supports both inspiration and perseverance.
RESHAPING STEM EDUCATION

To prepare a new generation for employment in the STEM fields — science, technology, engineering and mathematics — the nation must tap students from low-income, minority and immigrant families. TC has recently received nearly $20 million in federal funding to extend our work to meet that need.

Led by Vice Dean A. Lin Goodwin, we have created TR@TC2, part of a nationwide effort to prepare teachers who will improve STEM achievement. TR@TC2 builds on our leadership in medical residency-style teacher preparation. Our students co-teach with experienced mentors, immerse themselves in education research and absorb the principle of universal design for learning and curriculum development, which calls for educators to create a pathway to understanding for each and every learner.

TC is also spearheading the STEM Early College Expansion Partnership, through which our National Center for Restructuring Education, Schools & Teaching is increasing access and achievement in the STEM subjects for 22,000 high-need middle and high school students in Michigan and Connecticut.

By taking college-level courses, students are prompted to think about their college potential. Their teachers are guided by TC faculty members with prestigious i3 funding (the largest federal grant in its history) TC is preparing a new generation
Innovation (i3) grant. It’s the largest single federal grant TC has ever received.

GLOBAL MENTAL HEALTH

The 21st century is full of promise, but it has already been marked by war, natural disaster and epidemic. At Teachers College, Lena Verdeli and her Global Mental Health Lab are developing workable, cost-effective approaches to help populations cope with the psychological and emotional fallout of these crises.

Dr. Verdeli, who has collaborated with academic and humanitarian groups around the world, is perhaps best known for successfully adapting a method called Interpersonal Psychotherapy for use by villagers in Uganda, where the ravages of civil war and HIV/AIDS left many adults too paralyzed by yokwekyawa and okwekubagiza — self-hatred and self-pity — to care for their families. Now, funded by the International Medical Corps (IMC), she and her students are working in Jordan, a country of 6.5 million people that has absorbed more than 640,000 refugees from Syria during the past three years — the equivalent, as Dr. Verdeli says, of New York absorbing the populations of Rhode Island and Vermont. The TC team is comparing standard interventions to comprehensive mental health services provided by IMC. The latter, while more expensive, could potentially prevent devastating and costly psychological consequences for people who may live for years under conditions of impermanence and uncertainty.

INTERACTIVE DATA MINING

Interactions between people and digital technologies can generate valuable data about how individuals think,
decide and learn. Hence the ability of companies such as Amazon and Facebook to suggest new books and other products that you might be inclined to buy, or of your laptop to anticipate email addresses that you frequently use.

The past several years have seen the emergence of a new class of teaching tools known as intelligent tutoring systems. These tools can recognize and tag sequences of keystrokes made by students as successful or unsuccessful attempts to implement particular skills. At the classroom level, they enable teachers to assess their students’ knowledge and understanding on a daily basis and alter their instruction accordingly. More broadly, smart systems can aggregate data, offering a means to improve instruction and school management on a system-wide or even nationwide basis.

As the education community reorients itself to begin mining this wealth of data, a major challenge will be to produce researchers who combine technical expertise with an understanding of learning and human development. To that end, TC’s Ryan Baker, Associate Professor of Cognitive Studies, has created a unique new cognitively based master’s degree program in Learning Analytics.

Few figures on the education scene today are better qualified to lead such an effort. As a graduate student, Dr. Baker spent hundreds of hours observing K—12 classrooms to identify factors that either engage students’

EXTENDING OUR TRACK RECORD The College is adding to its “firsts” with the launch of unique programs in
EXTENDING OUR TRACK RECORD

The College is adding to its “firsts” with the launch of unique programs in learning analytics, creative technologies, Latino mental health and diabetes management.

In the Learning Analytics master’s degree program, TC students will not only learn the latest algorithms and tools in learning analytics and educational data mining, but also how to apply them to real-world problems, informed by key theories of cognition and education. They will study relevant policy, legal and ethical issues involved in conducting analytics on educational data. And they will emerge uniquely qualified for 21st-century jobs at educational technology companies and startups, educational think-tanks and data groups at city and state departments of education.

A R T A N D T E C H N O L O G Y

Technology is changing all fields, but perhaps none more dramatically than the fine arts. At TC, we have re-outfitted our sculpture studio as a fabrication laboratory, or “fab lab,” with an array of digital and electronic tools that enable artists to make and activate new kinds of objects that give form and expression to ideas. As Judith Burton, Professor of Art & Art Education, put it at a recent TC symposium, “Digital technology extends our pallet of possibilities, offering fresh insights and nuance to the ways in which we make our worlds meaningful and solve problems.”

TC is not alone in exploring those possibilities, but we stand apart in preparing teachers in the arts and other fields to interweave digital tools and materials into teaching that is playful, collaborative, entrepreneurial and multi- and cross-disciplinary. Professors Burton and Richard Jochum, together with doctoral candidate and Instructor Sean Justice, are fashioning a new concentration in Creative Technologies within our Art & Art Education master’s and doctoral programs. Their vision is that art is about agency and that artists are creative entrepreneurs who fashion practical approaches to realize opportunities — valuable skills in every profession and every area of life. In broadening the nation’s teaching focus from STEM to STEAM — that is, by adding “art” to “science, technology, engineering and math” — they seek to inspire teachers and students alike to apply a very wide range of imaginative approaches to the solution of everyday questions and problems. Thus our students will include not only studio artists but also teachers, principals and community outreach and development programmers. They will graduate into a New York City that is remaking itself as one of the nation’s leading centers for technology.

These are just some of the most striking examples of strategic innovation at TC. Others include:

- INVESTIGATIONS of the potential of mindfulness and social and emotional learning to help young children be attentive and...

CRISIS HEALER Lena Verdeli (center) and her students are pioneers in providing mental health support to populations in distress — including Syrian refugees in Jordan.

New Faculty

TC hired the following new faculty members for Fall 2014:

Christine Baron
Assistant Professor of Social Studies & Education

Noah D. Drezner
Associate Professor of Higher Education

Lisa Edmonds
Associate Professor of Speech & Language Pathology

Nathan Holbert
Assistant Professor of Communication, Media & Learning Technologies Design

Patricia Martinez Alvarez
Assistant Professor of Bilingual/Bicultural Education

Kimberly G. Noble
Associate Professor of Neuroscience & Education

Brandon Velez
Assistant Professor of Counseling Psychology

Ye Wang
Associate Professor of Education for the Deaf & Hard of Hearing

Haeny Yoon
Assistant Professor of Early Childhood Education

Monique Lane
Minority Postdoctoral Research Fellow

Photographs: TC Archives
collaborative, which could dramatically enhance their ability to succeed in school.

**DEVELOPMENT** within our Counseling & Clinical Psychology department of a unique program in Latino mental health — part of a broader effort to prepare psychologists who can realize Obamacare’s vision of integrating mental and physical healthcare for populations in need.

**A GROWING FOCUS** within our Edward D. Mysak Clinic for Communication Disorders on research-based treatment of aphasia, an impairment that affects speech production and comprehension and the ability to read or write.

**PILOT TESTING** by TC Professor Charles Basch in New York City schools of a comprehensive approach to overcoming health conditions that significantly hinder the academic achievement of low-income and minority youth.

Much of this work was initially backed by our Provost’s Investment Fund, an in-house venture capital mechanism to launch promising projects and position them to attract major funding from external sources. Nearly 100 faculty efforts at TC have benefited from the Provost’s funding since 2007, and several have achieved national prominence, including a curriculum that teaches high school students about the budget deficit and national debt, and the first online program to prepare nurses, pharmacists and other professionals in diabetes care and management.

Meanwhile, TC faculty, leadership, staff, students and alumni continue to grapple with a critical question:

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**Funding TC’s Work**  
*A breakdown of the total grant volume for Teachers College in fiscal year 2014*

<table>
<thead>
<tr>
<th>TOTAL GRANTS IN 2014</th>
<th>NEW AWARDS</th>
<th>RENEWAL AWARDS</th>
<th>SUPPLEMENTAL AWARDS</th>
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<td>$36,794,921</td>
<td>$28,907,439</td>
<td>$6,352,933</td>
<td>$1,534,549</td>
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Photographs: Deborah Feingold
How can we better enable and support innovation — with the ultimate goal to sustain and renew our legacy of shaping new programs and fields and maximizing their success?

One answer is by exploring the myriad possibilities to better serve thousands of TC alumni and other professionals with expanded professional development opportunities. Many faculty members are engaged in creating new certificate programs in areas ranging from mental health to global competency in education. We are also using new technologies to help alumni — particularly post-master’s professionals — upgrade their knowledge and skills.

Meanwhile, a new Chief Information Officer for the College, Naveed Husain, is strengthening our technology expertise and capacity on all levels. To enhance our practices and broaden our non-credit offerings and for-credit online courses and degrees, we’ve created a new position, Vice Provost for Digital Learning, to catalyze our digital expertise and strategic direction. We are developing a new intellectual property policy to encourage faculty to develop patentable or licensable products. And our newly created Board of Trustees Committee on strategic innovation is examining and discussing our institutional needs and goals across all these areas.

Every institution of higher learning worth its salt has brilliant people doing innovative work. At TC we are marshaling all our resources to advance our efforts and ensure maximum return on investment. That’s strategic innovation that just gets better with age.

**KEY THINKER** Ryan Baker is expanding knowledge about learning generated by mining data from education technologies.
School & Community Partnerships

TC’s Office of School & Community Partnerships (OSCP) coordinates engagement with New York City K—12 public schools, directing resources and expertise to areas with pronounced disparities in educational access and achievement between advantaged and disadvantaged groups. OSCP helps students succeed and strengthens TC’s knowledge, teaching and research. This year:

- At the OSCP-hosted annual meeting of the International Association of Laboratory Schools, held on Teachers College’s campus, TC President Fuhrman said partnerships among universities, school systems and communities can transform public education. Case in point: Teachers College Community School (TCCS), where 85 percent of students performed at or above grade level in literacy and math in 2013-2014, and led its district in applications for kindergarten seats.

- TCCS hosted an assembly with NASA astronaut Mike Massimino, visiting professor at Columbia’s Fu Foundation School of Engineering, and was visited by actor Jamie Foxx, shooting a remake of the film “Annie.”

- At the grand opening of its new state-of-the-art playground, TCCS honored supporter Scott Stringer, former Manhattan Borough President. The school has also introduced a robust music curriculum developed by TC’s Lori Custodero and opened an innovative new dedicated music room.

- REACH (Raising Educational Achievement Coalition of Harlem), TC’s newly named partnership with six pre-K—12 Harlem public schools, debuted at the College’s 125th Anniversary Gala. REACH is supported in part by a $1 million JPMorgan Chase Foundation grant.

- OSCP was awarded nearly $1 million from the New York State Department of Education to advance family engagement and health-related efforts at two REACH schools, the Heritage School and P.S. 36.

- During the 2013-2014 school year, REACH provided 600 hours of professional development to teachers and principals on Common Core State Standards-related classroom instruction, and 1,500 hours of afterschool and summer programs for students.

Lori Custodero
MIKE MASSIMINO

ACADEMIC EXERCISE With the help of former Manhattan Borough President Scott Stringer and other city officials, Teachers College Community School opened a new state-of-the-art playground.
Diversity & Community Affairs

Teachers College’s Office of the Vice President for Diversity and Community Affairs (ODCA) implements an ongoing academic and cultural approach to community building by supporting programs, initiatives and events with involvement from faculty, students and staff to address diverse institutional climate concerns. The Office promotes workplace contentment and respect through annual recurring initiatives, as well as through those that address current or immediate concerns for the various constituencies within TC’s diverse community.

- During the past year the Diversity and Community Initiatives (DCI) Grant program supported 14 distinct programs initiated by faculty, staff and students, totaling $13,350, and brought varied programs of interest to the community.


- ODCA addressed increased demands of the sexual violence and gender-based misconduct federal laws, promoted education about gender-based misconduct and discriminatory harassment, and strengthened TC’s climate concerning LGBTQ issues for all. The Office continued to proactively address the concerns of equity, harassment prevention, civility and best practices in the workplace, including through educational work shops on Mindfulness, Racial and Cultural Micro-aggressions, Columbia University SpeakOUT-Safezones training (around LGBTQ concerns), the Family Educational Rights and Privacy Act, Preventing Workplace Harassment and Gender-Based Misconduct.

- ODCA community-building initiatives included the Annual Community Thanksgiving Dinner, the Annual Community Cook-off and monthly Coffee and Tea Hours. The Office’s academically enriching programs included seminars, panel discussions and faculty Book Talks. Retention initiatives included numerous programs for students under the umbrella of the Black and Latino Male Doctoral Education initiative as well as opportunities to serve on named scholarship selection committees. Visit http://bit.ly/1CuKWMK to learn about other ODCA Programs.

BROADER DIALOGUE
LGBTQ advocate Jane Clementi spoke at TC; faculty member Aurelie Athan is an expert on the psychology of motherhood; atheists speak in faculty member Melanie Brewster’s new book.

Photos: Below, right, Stephen S. Mills; TC Archives; Illustration: David Ridley
Arts & Humanities

Beyond traditional schooling, the department’s programs focus on learners’ knowledge construction, the art and methods of teaching, the contemporary classroom, schools’ relationships with communities, and school reform philosophies. This year:

- The Applied Linguistics & TESOL program hosted professional conferences on discourse analysis and language assessment.
- The Art & Art Education program launched a new concentration in Creative Technologies (see page 5).
- The Bilingual/Bicultural Education program concluded Pedagogy of Social Imagination in Language Learning and Teaching, a federally funded multidisciplinary collaboration of faculty, teacher candidates, bilingual and monolingual teachers, and bilingual children and families.
- The Center for the Professional Education of Teachers and the English Education program, brought New York City high school students and international teachers together to stage a multimedia remix of the novel Frankenstein.
- The Social Studies Education program initiated “Merging Landscapes: An African-Generated Curriculum of Place,” research exploring young African newcomers’ experiences in New York City. The findings are increasing curricular attention to Africa and students’ needs.
- TC, World Savvy and the Asia Society designed a Global Competence Certificate program to improve teaching about the United States in a global context.
- The Music & Music Education program developed classes and afterschool programming at the Teachers College Community School.
- The program in History & Education and the Center on History and Education collaborated with TC’s Institute for Urban and Minority Education on the historical investigation project “Educating Harlem.” The project included the inaugural Edmund Gordon Lecture, delivered by Charles Payne of the University of Chicago School of Social Service Administration. Gordon is TC Professor Emeritus of Psychology & Education.
- David Hansen delivered his inaugural lecture — “Is Education Possible Today?” — as John L. & Sue Ann Weinberg Professor in Historical & Philosophical Foundations of Education.
- Anand R. Marri took a research leave to become Vice President and Head of Economic Education for the Federal Reserve Bank of New York.

NEW LIFE FOR A CLASSIC

Visiting teachers and students performed a “remix” of Frankenstein. At right: A poster from the “Educating Harlem” initiative of TC’s Institute for Urban and Minority Education.

DECK THE HALLS... with plastic beach umbrellas and other weird stuff. During Fall 2013, the exhibition “Doing and Undergoing” featured a group of commissioned works that transformed TC’s campus to explore the Deweyan concept of learning through experience. Here: Kara Daving’s exuberant reimagining of the wooden cubbies on the third floor of Zankel Hall.
Biobehavioral Sciences

The department probes the biology of human communication, movement and related disorders. Graduates become speech-language pathologists, exercise physiologists, trainers, cardiac rehabilitation, occupational and physical therapists, researchers and administrators. This year:

- The Physical Education program co-sponsored a teaching in-service seminar with Columbia’s Department of Physical Education & Intercollegiate Athletics Department and Project SPARK.


- With Wyncote Foundation funding, TC’s Catherine Crowley led the creation of books distributed domestically and in Latin America on Spanish sounds misarticulated by children with cleft palate repair.


- Carol Ewing Garber became President of the American College of Sports Medicine and keynoted at meetings nationwide and abroad.

- Joseph Cicollo co-authored articles on resistance exercise and received federal funding to study the method as a smoking cessation aid.

AN EASIER LIFT  Therapies developed by TC’s Andrew Gordon have enabled thousands of children with cerebral palsy to live more active lives, and could ultimately help patients with neurological disorders such as Parkinson’s or who need a prosthetic hand.

www.tc.edu
Counseling & Clinical Psychology

Through its four degree programs — the M.A. in Psychology & Education, the Ed.M. in Psychological Counseling, and two Ph.D. programs, in Counseling Psychology and Clinical Psychology (APA-accredited) — the department prepares students to investigate and address the psychological needs of individuals, families, groups, organizations, institutions and communities, with a growing emphasis on multicultural competencies. This year:

- The faculty developed programs in Sexuality, Women & Gender and Bilingual Latina/o Mental Health Counseling. The former has since been approved by the New York State Department of Education. The SWG initiative reflects a broader effort to mainstream these three areas as a focus in course offerings across all Teachers College departments. The bilingual certificate program will help prepare doctoral fellows funded by TC’s new Graduate Psychology Education training grant from the federal Health Resources and Services Administration. The grant aligns with the Affordable Care Act to closely ally medical caregivers and those in the mental health fields. The TC fellows will initially train at TC’s Dean Hope Center for Educational and Psychological Services, directed by Dinelia Rosa.

- Other offerings in earlier-stage development by the department include a master’s degree program in Social Justice & Community Well-Being and a credentialed Alcoholism & Substance Abuse Counselor program.

- A new Spirituality Mind Body Summer program debuted on the Teachers College Summer Intensive program.

- The world’s first Psychoanalytic Fair, convened by the department, drew 500 practitioners and institute representatives.

- The world’s first Psychoanalytic Fair, convened by the department, drew 500 practitioners and institute representatives from 33 prestigious institutes. The event was organized by Aurelie Athan, who serves as Director of TC’s M.A. program in Clinical Psychology, and master’s degree student Marie Hansen, founder of an on-campus inter-disciplinary group that promotes psychoanalytic thought.
Curriculum & Teaching

The department explores the nature, purpose and design of curricula and the theory and practice of teaching, focusing on social inequalities and children in under-resourced schools. It prepares outstanding educators with intellectual tools to reimagine schools and other educational settings and to ensure that all children receive the kind of education historically reserved for those of privilege. This year:

- Vice Dean A. Lin Goodwin led creation of TR@TC2, a federally funded program to prepare teachers who will improve student achievement in the STEM disciplines (see page 2).

- Lucy Calkins, Robinson Professor in Children’s Literature and Director of the Teachers College Reading and Writing Project, delivered a Provost’s Series talk on the challenges educators face in implementing the new Common Core State Standards. Calkins is coauthor of the widely read Pathways to the Common Core: Accelerating Achievement.

- TC’s Provost funded the department to convene this year’s Sachs Lecture series, titled “Landscape for Preparing Teacher Educators: Whose Knowledges? What Visions?” Seven visiting scholars will envision a doctoral program for educating teacher educators, which the department plans to create because most people working in the field lack specific preparation.

- Curriculum & Teaching alumnus Daniel Foerg-Spittel (M.A. ’96), a language arts teacher in the Tenafly, New Jersey, school system for 27 years, was one of four teachers selected to receive the state’s Distinguished Secondary School Teaching Award.

- TC’s National Center for Restructuring Education, Schools and Teaching, co-directed by Jacqueline Ancess, received a $12 million grant from the U.S. Department of Education’s Investing in Innovation (i3) fund to increase access and achievement in the STEM subjects (science, technology, engineering and math).

STEM for All
Better science, technology, engineering and math teaching is a TC priority.

FULLER SCIENCE LEARNING Children in TC’s Hollingworth Summer Science Camp discover Buckminster Fuller’s concept of tensegrity and other construction principles. Last summer Columbia’s Shree Nayar extolled the design of the Kikkoman soy sauce bottle.
Education Policy & Social Analysis

The department focuses on how governments, markets and societal conditions combine to shape schooling and educational opportunities at all levels, and on the creation of an informed population that has the skills to critically analyze its own areas of need and interest and work in concert toward creating a better world. This year:

- Henry M. Levin and TC’s Center for Benefit-Cost Studies in Education were federally funded to train researchers in cost effectiveness and cost-benefit analyses of education interventions.

- The Inter-American Development Bank funded Sharon Lynn Kagan to compare the delivery of quality, equitable early childhood services in five countries in Latin America and the Caribbean. Kagan, who became a Fulbright Senior Scholar, coedited the forthcoming International Handbook of Early Childhood Research and compared 10 states’ early learning standards — the basis for developing kindergarten entry assessments.

- Kevin J. Dougherty and colleagues completed a Lumina Foundation-funded study in three states on performance funding for higher education institutions based on student persistence, credits accrued and college completion rather than enrollments. One finding: performance funding may affect institutional behavior more than student outcomes.

- The Wallace Foundation funded Jeffrey Henig, Carolyn Riehl and Michael Rebell to study whether and how urban community institutions can jointly tackle local social and educational challenges.

- A $10 million federal grant to TC’s Community College Research Center created the Center for the Analysis of Postsecondary Readiness. Launched at a White House Ceremony, the Center, co-directed by Thomas Bailey, evaluates new remedial assessment, placement and instruction approaches.

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- Amy Stuart Wells and Douglas Ready reported that small suburban districts are most vulnerable to resegregation. They spoke at a Brown v. Board of Education 60th anniversary conference cosponsored by the Rauch Foundation, led by TC Trustee Nancy Rauch Douzinas. Wells and Ready found that Nassau County’s non-Hispanic white population share has declined nearly 25 percent since 1980, yet school racial/ethnic segregation has barely budged. The Brown decision, handed down by the Supreme Court in 1954, outlawed segregation in public schools.
Health & Behavior Studies

The department researches behavioral and social determinants of health and learning throughout the lifespan. Alumni practitioners, researchers and leaders help people self-actualize, make informed decisions and attain quality of life. This year:

- The Annual Health Disparities Conference of TC’s Center for Health Equity and Urban Science Education (CHEUSE), “Urban to Global Health: Culturally Appropriate Research, Practice and Policy,” featured social scientists David Williams (Harvard) and Mindy Thompson Fullilove (Columbia), nutrition author Michael Moss, and CHEUSE co-directors Barbara Wallace, Professor of Health Education, and Christopher Emdin, Associate Professor of Science Education.

- In its first major policy research report, TC’s Laurie M. Tisch Center for Food, Education & Policy found most New York City elementary schools lack nutrition education provided by experts, essential to promote healthful eating. The Tisch Center also co-convened NYC4CNR, an alliance for a strong Child Nutrition Act in 2015 to provide healthful food and nutrition education.

- Reading Specialist Susan Garni Masullo’s workshop for elementary and middle school teachers focused on current research and increasing classroom expertise.

- Blackman lecturer J. David Smith (University of North Carolina-Greensboro) discussed special education’s evolution. Professor Emeritus Leonard Blackman, his wife, Frances, and friends and family fund the lecture.

- In New York City’s Chinatown, Hsu-Min Chiang, Associate Professor in Autism Spectrum Disorders, taught social skills and adaptive behavior to children with autism. Parents learned behavioral management strategies and about education law and stress management.


- The American Psychological Association fully reaccredited TC’s School Psychology Program, with seven years to the next accreditation.

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Photographs: Above, Deborah Feingold; Lower right, Hua-Chu Yen; Top right, courtesy of Camped Up; TC Archives
Human Development

The department’s research centers on fundamental issues in human development, human cognition, and measurement and applied statistics to increase scientific knowledge and help solve educational and social problems. This year:

- Matthew Johnson received a National Science Foundation grant to conduct statistical analysis to identify specific strengths and weaknesses underlying the performance ranking of U.S. students on the Trends in International Mathematics and Science Study (TIMSS).
- Young-Sun Lee coauthored a paper in Applied Psychological Measurement that used data from the fourth-grade TIMSS to demonstrate significant relationships between students’ abilities in science and mathematics.
- Xiaodong Lin reported at the American Educational Research Association her findings that New York City students who read and reflected upon stories of famous scientists facing intellectual or life struggles increased their growth mindset and academic performance.
- With Spencer Foundation funding, Elizabeth Tipton (at right) developed software to target and recruit schools and school districts for large-scale research and to improve generalizations from experiential findings.
- The National Science Foundation, the U.S. Department of Education, the U.S. Army and the Gates Foundation funded Ryan Baker to continue development of online systems that infer student engagement and predict long-term student outcomes (see page 3). In fall 2014, Baker also taught Teachers College’s first massive open online course (MOOC), which focused on the burgeoning field of mining data from interactive online learning technologies. The course drew some 48,000 students. Baker has since been mining data from the course to understand factors that promote or inhibit the engagement of students in an online learning environment.
- Carey Cooper received a Society for Research on Adolescence grant for a follow-up study of the socioeconomic factors that affect the educational attainment of Mayan youth in rural Guatemala.

She had to work at it too: Even geniuses like two-time Nobel Prize-winner Marie Curie struggled before they succeeded. TC’s Xiaodong Lin believes their stories could help young students increase their “growth mindset” and perform better academically.
International & Transcultural Studies

As people, information, goods and services increasingly flow within and across national boundaries, the department’s two programs — International & Comparative Education, and Anthropology — explore individual and institutional identities reflecting diverse cultural values, globalization and education in developing countries. This year:

- Gita Steiner-Khamsi and students launched a new UNICEF-funded study in Kyrgyzstan on the connection between teacher pay and teacher quality. Teacher salaries there have tripled because of their work.

- At “The Future of Anthropology and Education,” Hervé Varenne challenged conference colleagues to “educate our audience about the power of what we do.” Since TC’s Margaret Mead, anthropology’s ethno- graphic methods have illuminated education inside and outside classrooms.

- Arts & Humanities Ph.D. candidate Cati de los Rios, International & Transcultural Studies M.A. student Adriana Lovera and Bilingual/Bicultural Education M.A. student Kristy Ayala received Televisa Graduate Research Fellowships in Latino Education. The three spearheaded the Televisa Foundation-sponsored conference “Communities in Action: Access to Quality Education for Latino Students.” Speakers included faculty members Regina Cortina and Christopher Emdin, Televisa Foundation Program Officer Alejandra Perez Reguera and New York City Council Member Mark Levine. The foundation’s cultural and educational programs help U.S. Latinos.

- Oren Pizmony-Levy launched a study in Israel of how international assessments of student achievement, such as Trends in International Mathematics and Science Study (TIMSS) and Programme for International Student Assessment (PISA), affect public opinion about education. Pizmony-Levy taught a new seminar, Sociopolitical Analysis of International Assessment of Student Achievement.

- Garnett Russell, Mary Mendenhall and other faculty received a TC Global Investment Fund grant for the study “Supporting and Researching Teacher Professional Development in Kakuma Refugee Camp, Kenya” and a TC Faculty Diversity Research grant to study “Human Rights Education for Diversity.”

Photographs. Above right, © UNICEF Kenya/2012/Noorani; Below, Smithsonian Institution Archives Illustration: Gordon Studer; TC Archives
Math, Science & Technology

Current reforms in education place increasing emphasis on broad-based public understanding of the department’s three core fields. The department focuses on issues of educational practice and related professions, including the relationships among its three disciplines. This year:

- O. Roger Anderson presented an invited paper, “Radiolaria in a Changing Global Climate,” for the American Association for the Advancement of Science series “Cutting Edge: Art & Science of Climate Change.” Radiolaria are plankton tracked to detect ocean temperature changes.


- Alexander Karp edited Leaders in Mathematics Education: Experience and Vision (Sense Publishers) and co-authored Handbook on the History of Mathematics Education (Springer).

- Erica Walker authored Beyond Banneker: Black Mathematicians and Pubs to Excellence (SUNY Press).

- Communications, Media and Learning Technologies Design, the department’s renamed technology arm, recast its M.A. program as “Design and Digital Games.” A new Media and Social Change Lab advances multi-modal scholarship.

- “Engaging Communities of Learners,” the 2014 student-run TC Educational Technology Conference, was keynoted by Jordana Drell, Vice President, Preschool Games, Nickelodeon Group, and Dennis Tenen, Assistant Professor of Digital Humanities, Columbia University.

- The Annual Meeting of the Northeast Region Association for Science Teacher Education (NE-ASTE) was organized at TC by Jessica Riccio (NE-ASTE Director), Felicia Moore Mensah and alumna Amanda Gunning (NE-ASTE Treasurer). O. Roger Anderson was honored for his 50 years as a faculty member and science educator.
Organization & Leadership

The department understands leadership as an ethical imperative inextricably linked to learning, and groups and organizations as communities of diverse individuals who bring unique perspectives to the collective endeavor of promoting the common good. This year:

- W. Warner Burke published the fourth edition of his bestselling text, *Organization Change: Theory and Practice* (Sage), which grounds effective change in knowledge of people’s workplace behavior.


- Corbin Campbell became an Academic Fellow of the Institute for Higher Education Policy.

- Anna Neumann was inducted into the National Academy of Education. *The Review of Higher Education* published “Staking a Claim on Learning: What We Should Know about Learning in Higher Education, and Why,” an elaboration of her presidential address to the Association for the Study of Higher Education.

- Madhabi Chatterji co-edited a special issue of *Quality Assurance in Education* titled “Validity, Assessment and Accountability: Contemporary Issues in Primary, Secondary and Higher Education.”

- Alex Bowers participated in the National Science Foundation’s data-intensive research lab fostering transformative approaches to STEM teaching.

- Lyle Yorks co-authored “Looking in the Mirror of Inquiry: Knowledge in Our Students and in Ourselves,” in the journal *Teaching and Learning Inquiry.*

- Eleanore Drago-Severson co-authored papers on leadership in *The Journal of Staff Development* and *The Journal of Research on Leadership Education.*

- Pearl Kane secured Benedict Foundation funding for students entering a new dual degree program in international school leadership created by TC’s Klingenstein Center for Independent School Leadership with Columbia Business School and INSEAD.

**Just Threatened? Making Meaning of Gendered Cues in STEM Academe**

W. Warner Burke

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Illustrations: Above, Robert Pizzo; Right, Adam Craft; Photographs: TC Archives
This year, in launching *Where the Future Comes First: The Campaign for Teachers College*, I am so proud that we have answered each of the questions with a resounding, "Yes."

The issues we address have always been clear. Since our founding 126 years ago, our work has centered on translating knowledge about how people learn in all fields into more effective teaching; creating new fields by looking at the big issues through a big lens that combines knowledge from all our areas of expertise; leveling the playing field for all learners by reversing the corrosive effects of poverty; and advancing policy research and recommendations that help leaders identify and bring to scale the approaches that work best.

Expertise has never been a problem either. Throughout our history, we have marshalled the people and ideas to help the world meet these challenges during different eras — and we are doing it again right now. To cite just a few examples:

- Great teaching has long been considered an art, but now TC stands at the forefront of adding a powerful new science-based dimension. On the back cover of this annual report, we celebrate O. Roger Anderson, a 50-year faculty member who has pioneered in applying cognitive and neuroscience theory to research on how students learn and think about science. Meanwhile, as President Fuhrman describes in her opening message, TC...
is emerging as a leader in mining data from new interactive technologies that reveal how students are making sense of new concepts. Far from mechanizing teaching, these approaches are shaping more personalized instruction for each and every student.

Yet even the best teaching cannot ensure success for impoverished children who suffer from poor diet, poor health and the stresses of living in unstable or violent circumstances. Health education professor Charles Basch has been working for years to document the ways that these and other health issues contribute to the achievement gap. Now he is working in New York City with the Children’s Health Fund, a nonprofit founded by singer/songwriter Paul Simon and Columbia public health authority Irwin Redlener, to test his model for using schools themselves as a focal point for delivering health services to disadvantaged students.

TC’s Laurie M. Tisch Center for Food, Education & Policy, founded two years ago through a generous gift from Trustee Emerita Laurie Tisch, is fighting at the local and national levels to shape healthier eating behaviors among children. This past summer, in its first major report, the Center documented the lack of quality nutrition education programs in New York City schools and called for a doubling of programs provided by outside experts. The Tisch Center has also co-convened a New York City alliance for renewal of a strong federal Child Nutrition effects for all learners; and advances policy research on the best approaches.
and WIC Reauthorization Act that would best serve low-income children and families.

TC and its faculty are increasingly active in Brazil and other regions through collaboration with Columbia University's Global Centers, while several new Global Innovation Fund awards presented during the year supported research abroad by individual faculty members. The College's global engagement includes supporting STEM education in Indonesia, special education in Oman, technology deployment in Bulgarian classrooms, the creation of a Bachelor of Education degree in Pakistan, and research on teacher education and instructional models in math and science in the Pacific Rim. Small wonder that when President Fuhrman spoke in South Korea, alumni who attended responded by pledging $120,000 in Campaign contributions. This past October in TC's Milbank Chapel, we also held a symposium commemorating Kuo Ping Wen, who in 1914 became the first Chinese national to receive a doctorate from Teachers College, and announced creation of the Kuo Ping Wen Scholarship Fund for international students from China. Representatives of colleges and universities throughout China attended, as well as Yu Wei, a former Vice Minister of Education. The event was co-sponsored by the C.V. Starr East Asian Library, Columbia University and the China Institute. It was spearheaded by Carolyn Hsu-Balcer, Kuo's great grand-niece.

The Teachers College Community School (TCCS), which we founded in West Harlem in 2010, and
REACH (Raising Educational Achievement Coalition of Harlem), our partnership with six pre-K—12 Harlem public schools, are demonstrating that universities can be transformative partners in public education. At TCCS, where kindergarten seats are now the most sought-after in the district, programs reflect the direct input of TC faculty in math, science, music, psychology, nutrition, reading and writing, physical education and art. More than 70 TC students worked at the school in 2013-2014, serving as specialty and pre-service teachers, afterschool instructors, classroom assistants and psychological counseling and literacy interns. REACH, which is generously supported by the JPMorgan Chase Foundation, provided 600 hours of professional development to teachers and principals and 1,500 hours of after-school and summer programs for students during the past year.

Successes like these have enabled us to reengage our extended TC family and publicly commit ourselves to raising $300 million — the largest Campaign goal ever set by a graduate school of education.

That work began with the efforts of Trustee E. John Rosenwald Jr. and Trustee Emerita Laurie M. Tisch, who placed us on a firm footing for launch by expertly guiding the Campaign through its quiet phase. Thanks to their leadership and support, we were halfway home by the time we formally announced our fundraising goal. At TC’s 125th Anniversary Gala, held in November 2013 at Harlem’s legendary Apollo Theater, TC faculty, students, alumni and friends...
Get Engaged!
Join TC’s Campaign

Inspired by TC’s Campaign? Get in on the action and stay in the loop. Sign up to receive emails by updating your contact information at tc.edu/alumni, and or follow us on social media at tc.edu/alumni/connect.

Check out the accomplishments of your fellow alumni in our Alumni Spotlight stories at tc.edu/alumni — and email us your own good news at tcalumni@tc.edu.

Visit tc.edu/alumni/events for the latest information about regional events in your area.

And circle April 11th, 2015, on your calendar to come back to TC’s campus for our seventh annual Academic Festival, featuring a keynote address by actor, producer, director, writer and children’s advocate Goldie Hawn. Visit tc.edu/festival to learn more.

turned out in droves to celebrate the College’s unparalleled legacy of “firsts” (reflected in a rousing, Broadway-style review). We saluted a group of visionary philanthropists who are helping build an even stronger TC, and our Gala audience donated $1 million to TC’s new 125th Anniversary Scholarship.

This past summer, John and Laurie passed the baton to three Board colleagues with TC in their genes. Campaign Chair Marla Schaefer, the former Co-Chairman of Claire’s Stores, is an alumna of our social-organizational psychology program. Marla’s Vice Chairs are Bill Rueckert, our Board Co-Chair and the great nephew of TC’s founder, Grace Hoadley Dodge; and Leslie Nelson, a business and

ALUMNI AFFIRMATION
More than 1,000 TC alumni and friends turned out for the College’s sixth annual Academic Festival in April 2014. During a break in the proceedings, Distinguished Alumni Award recipient Kate Parry (Ed.D. ’86) greeted Chris Inya (Ed.D. ’84).

THE CAMPAIGN COMMITTEE
From left: Trustee Valerie Wayne (M.A. ’98); Linford Lougheed (Ed.D. ’77); Susan Bram (M.A. ’87); Rebecca Binder (M.A. ’00); Trustee Camilla Smith (M.A. ’72); Alumni Council member Beverly Johnson (Ed.D. ’86); Trustee Missie Rennie Taylor; Julie Ratner (Ed.D. ’96); Campaign Chair and Trustee Marla Schaefer (M.A. ’03);
nonprofit leader now focusing her energy on New York City’s public schools.

Marla, Bill and Leslie have given huge amounts of time, energy and enthusiasm to Teachers College. They also created a Campaign Committee of TC alumni and friends hailing from across the country and representing fields that include education, psychology, journalism, finance, publishing, philanthropy and the nonprofit sector. This impressive group is spreading the word about the Campaign and the impact of Campaign giving.

Meanwhile, the dedicated members of our Alumni Council have helped our Alumni Relations team organize Campaign rollout events in 15 states and six countries. These gatherings were attended by nearly 5,000 alumni and friends — including 1,000 at TC Academic Festival in April 2014. And by partnering with TC programs such as English Education, the Spirituality Mind Body Institute, and Movement Science & Education, we have fostered deeper networks among our 90,000 alumni around the world.

We also kept alumni informed about TC news, faculty research, student initiatives, networking opportunities, career resources and, of course, each other. Our stories of graduates who are winning accolades as college presidents, superintendents, school leaders, hospital administrators, national appointees, industry leaders, cutting edge researchers, authors, editors and entrepreneurs helped us garner some 2,300 likes on our alumni Facebook page and attract 13,500 new Twitter followers.

As a result, by the end of November 2014, the Campaign had raised $186.3 million, more than 61 percent of our overall goal. We have welcomed more than 80 new members to our Dewey Circle of supporters since the Campaign’s launch, a 43 percent increase, and added 100 new Grace Dodge Society members, a 32 percent increase since Campaign launch.

Because our ultimate aim is to enable work that
New Scholarships

125th Anniversary Scholars
The Atkins Rosen Scholarship Fund
COUNSELING AND CLINICAL PSYCHOLOGY
The Barnett Family Scholarship Fund
ARTS ADMINISTRATION
James and Landis Best Scholarship Fund
EDUCATION LEADERSHIP
Eileen Cutler Scholarship Fund*
Endowed Scholarship, English Education
A.M. Gentile Scholarship Fund in Motor Learning
HUMAN DEVELOPMENT
Patricia Green Endowed Scholarship Fund*
Ruth L. Gottesman Math & Science Education Scholarship Fund
Mariam & Shervin Korangy Endowed Scholarship
MOVEMENT SCIENCE AND NEUROSCIENCE
Dr. Elizabeth Phelan and Dr. Francis Xavier
Lawlor Endowed Scholarship Fund in Honor of Professor Mary Buss Rowe
SCIENCE EDUCATION
Barbara Jean Lewis
EARLY CHILDHOOD EDUCATION SCHOLARSHIP
LGBTQ Diversity Scholarship Fund
C.Y. Li Scholarship Fund
FOR A STUDENT FROM CHINA
Nanchuan Endowed Scholarships for Masters or Doctoral Students
EDUCATIONAL LEADERSHIP
National Center for Children & Families
PRE-DOCTORAL FELLOWS/EPDA
Franklin W. and D. Jean Neff
Endowed Scholarship Fund
FOR DOCTORAL STUDENTS IN ORGANIZATION AND LEADERSHIP
The Nutritional Ecology Scholarship
NUTRITION
Lida A. Orzecz Scholarship Fund
SOCIAL-ORGANIZATIONAL PSYCHOLOGY
Ruth Treiber Rauch Endowed Scholarship
FOR PRESERVICE TEACHERS FOR HIGH-NEEDS PUBLIC SCHOOLS
Carole L. Sleeper Scholarship*
The Kuo Ping Wan Scholarship Fund
FOR STUDENTS FROM CHINA
Emanuel and Barbra Streisand Scholarship Fund*
The Kenneth and Anna Zankel Scholarship Fund
ART ADMINISTRATION/ART EDUCATION

*GENERAL SUPPORT

improves the world, program and faculty support have taken the lead, often establishing innovative new academic concentrations (see President Fuhrman’s letter on page 1 for a terrific sampling).

Yet our top funding priority is scholarships and fellowships. We want students who dedicate themselves to service in fields where there is great need for talented education professionals to graduate without crushing debt. And we want to ensure that our faculty have an army of great doctoral students who can devote their full time and attention to advancing important research and their own careers. So far, we have raised $48.2 million for scholarships, and this year alone, we have created 23 new scholarships — including 18 that are endowed — across all 10 academic departments.

The Campaign is making great progress, but we still have far to go. So won’t you join us? Each and every one of you has the opportunity to participate in a way that makes a lasting and meaningful impact, whether by donating to the TC Fund, creating a $50,000 endowed scholarship or making that transformational gift that will change the College as we know it. The future of education, health, psychology and leadership depends on your support — and as this Annual Report demonstrates, at TC, the future really does come first.

WITH HELP, HELPING OTHERS
Ed.D. student Bhavini Surana, from Gujarat State in India, is a Mariam & Shervin Korangy Scholar. She is working with Movement Sciences Professor Andrew Gordon to help children with cerebral palsy improve their ability to walk.
Still creating After All These Years
O. Roger Anderson

For 50 years, O. Roger Anderson — Professor of Natural Sciences; Chair, TC’s Department of Math, Science & Technology; researcher at Columbia’s Lamont-Doherty Earth Observatory — has bridged bench science and science education. Anderson is a leading authority on plankton, including those that reflect ocean temperature change — but he’s also recognized as the first, and currently leading, science educator to apply cognitive and neuroscience theory in research on science learning and thinking. He co-developed an early online science program that challenged students to use real-world data. He devises ways to enhance students’ mental mapping of information. He co-founded a unique program for educators in dentistry.

“TC people serve their disciplines, but also seek to improve society,” Anderson says. He has set the bar.