Annual Report

Center for Teaching and Learning
Office of the Provost

2022-2023

DEAD IDEAS IN TEACHING AND LEARNING

ADVANCING MENTORSHIP PRACTICES

Teaching and ChatGPT Forum

COLUMBIA | OFFICE OF THE PROVOST
TEACHING TRANSFORMATIONS
Faculty Reflections and Insights on Pandemic Practices

Thank-a-Prof Thank-a-TA

CTL

COLUMBIA UNIVERSITY
IN THE CITY OF NEW YORK

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Our Mission

The Center for Teaching and Learning (CTL) partners with faculty, students, and colleagues across the University to support excellence and innovation in teaching and learning. The CTL is committed to advancing the culture of teaching and learning at Columbia through all of its programs, services, and resources.

The CTL understands teaching as a critical practice, driven by inquiry, experimentation, reflection, and collaboration. We promote pedagogy that is inclusive, learner-centered, and research-based. We support the purposeful use of new media and emerging technologies in the classroom and online to foster the success of Columbia's instructors and students.

Our Vision

Our vision is a Columbia teaching community that innovates in evidence-based instructional practices and technology use, promotes and participates in the research on learning, and commits to creating inclusive and equitable learning environments.

Letter from the Interim Provost

Dennis Mitchell
Interim Provost

Dear Colleagues:

I am proud to share the eighth annual report of the Columbia University Center for Teaching and Learning (CTL).

As a member of the Office of the Provost since the CTL's inception, and now as Interim Provost, I have worked closely with the CTL for many years. As I've watched its growth and development, I am continually impressed by how the CTL transforms pedagogy across Columbia. This report offers powerful examples of specific initiatives, the people they engage, and the ongoing expansion of the CTL's reach and impact.

In the following pages, you'll discover the many ways the CTL addresses the most pressing issues in pedagogy, from artificial intelligence to evidence-based methods to create inclusive, equitable, and student-centered learning environments.

For example, the CTL's anti-racism initiatives and programs continue to enrich learning environments across the university, including through the CUIMC Anti-Racist Educator Institute and the faculty panel "Anti-Racist Pedagogy in Action."

Meanwhile, the CTL's new Advancing Mentorship Practices initiative is helping educators and researchers strengthen their mentorship skills, helping them amplify their impact on the next generation of scholars. Expanding and new initiatives alike continue to inspire instructors, and by extension, our students and postdocs. Personal accounts throughout the report bring that fact to life.

I hope this report leaves you as inspired as I am by the many examples of how Columbia instructors are building learning environments where everyone can thrive. I also encourage any educator who is not currently working with the CTL to do so and join the growing numbers who are transforming pedagogy across the university and beyond.

Sincerely,

Dennis A. Mitchell, DDS, MPH (he/him)
Interim Provost
Professor of Dental Medicine at CUMC

Letter from the Senior Vice Provost

Soulaymane Kachani
Senior Vice Provost

Dear Colleagues:

In this report, you will see the ways in which the Center for Teaching and Learning (CTL) has become a central hub for bringing Columbia faculty and graduate student instructors together to share their work and ideas to improve teaching and learning, and to inspire one another.

From the Provost's Senior Faculty Teaching Scholars, who work with the CTL to innovate teaching in their departments and schools, to the 50+ faculty who contributed to the *Teaching Transformations: Faculty Reflections and Insights on Pandemic Practices* guide, to the instructors who spoke at the "Teaching and ChatGPT Forum," these communities are leading efforts across Columbia's campuses to support and transform teaching and learning. At the 2023 Celebration of Teaching and Learning Symposium, we acknowledged the work and power of these communities, including faculty who are bringing new ways of thinking and of engaging our learners with different technologies and different ways of interacting in classrooms, in laboratories, with one another, and with their instructional teams.

Also celebrated at the Symposium was another community of faculty who have been generous in sharing their teaching discoveries and successes—those who have received Teaching and Learning Grants. The Office of the Provost continues to expand its community of teaching grant awardees who work with the CTL, bringing the total projects funded since 2014 to 297. Included in this year's funding were an exciting batch of projects that experiment with generative AI tools in pedagogy, courses, and curricula. We are excited to see the outcomes of these projects.

Lastly, through a partner office of the CTL, the Science of Learning Research (SOLER) Initiative, another vibrant hub of instructors has formed—those who engage in research to further the Science of Learning. The SOLER Seed Grants program has now funded a total of fourteen projects by faculty from across the University who are leading research efforts to better understand and improve teaching and learning in Columbia courses.

I invite you to read about these growing communities in this report. And if you haven't yet done so, I encourage you to reach out to the CTL to join an incredible group of people dedicated to pushing the frontiers of teaching and learning in higher education.

Sincerely,

Soulaymane Kachani, PhD (he/him)
Senior Vice Provost

Letter from the CTL Executive Director

Catherine Ross
Executive Director of the Center for Teaching and Learning

Dear Colleagues:

As I look through this year's report I am struck by how much we are able to rely on our faculty and graduate student partners to represent the impact of the CTL's work on promoting inclusive and equitable teaching practices. We have many instructor partners now, based on over eight years of educational development and entering the tenth year of Provost's Teaching and Learning Grants. We call on these instructors to share with others how these pedagogical changes work and why they are important. This past year, with the arrival of AI, we saw once again how our faculty partners came together with the CTL to help their colleagues better understand and think through the potential uses and challenges of using these tools in their teaching. Overall, we have had six faculty panels this past year, highlighting anti-racist pedagogy, pandemic teaching innovation, Provost-funded innovations in teaching, and understanding and teaching with AI. It is thrilling to see an active community of instructors who value teaching enough to reflect on it deeply and share their ideas with others. The CTL can ignite and support the work, but the Columbia teaching community makes it happen.

We have also continued to expand our *Dead Ideas in Teaching and Learning* podcast community. With close to 50,000 downloads across six seasons, we are now seeing other teaching centers use the podcast as a catalyst for teaching development opportunities, creating communities of practice to use the ideas and resources shared in the 40 total episodes. The podcast has become both a catalyst and a fulcrum for our work in the CTL. Our guests and listeners have created a national and international network who share their ideas, their research, and their passion for teaching and learning.

The work represented in this report is also indicative of the generosity of our partners. I want to thank our incredible partners in the Office of the Vice Provost for Faculty Advancement and in the Science of Learning Research (SOLER) Initiative. With these dedicated allies, we are able to sustain and expand our social justice mission of equitable and inclusive teaching for all students.
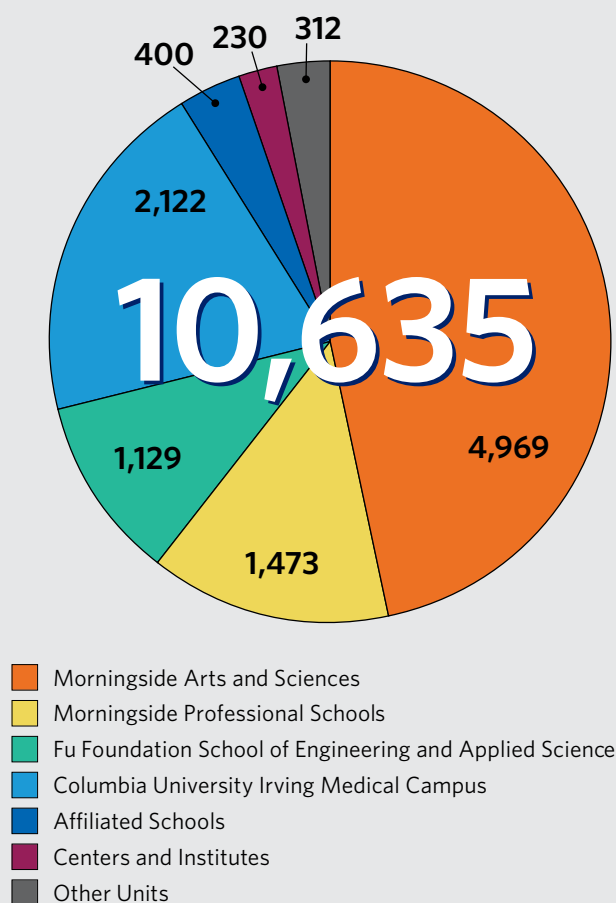
Sincerely,

Catherine Ross, PhD (she/her)
Executive Director, Center for Teaching and Learning

Annual Highlights

Interactions with Columbia-Affiliated Individuals

10,635

- 4,969 — Morningside Arts and Sciences
- 1,473 — Morningside Professional Schools
- 1,129 — Fu Foundation School of Engineering and Applied Science
- 2,122 — Columbia University Irving Medical Campus
- 400 — Affiliated Schools
- 230 — Centers and Institutes
- 312 — Other Units

Legend:
- Morningside Arts and Sciences
- Morningside Professional Schools
- Fu Foundation School of Engineering and Applied Science
- Columbia University Irving Medical Campus
- Affiliated Schools
- Centers and Institutes
- Other Units

Service to Columbia University

3,671 consultations and service interactions with Columbia-affiliated individuals

1,327 Columbia-affiliated individuals in on-demand courses

83 graduate student fellows and teaching consultants

40 teaching and learning projects funded by the Office of the Provost

Service to Columbia University and Beyond

**2,447,430 minutes watched**
on ColumbiaLearn YouTube Channel

24 CTL-produced MOOCs
active on edX

126,589 learners enrolled
in CTL-produced MOOCs that were active during the year

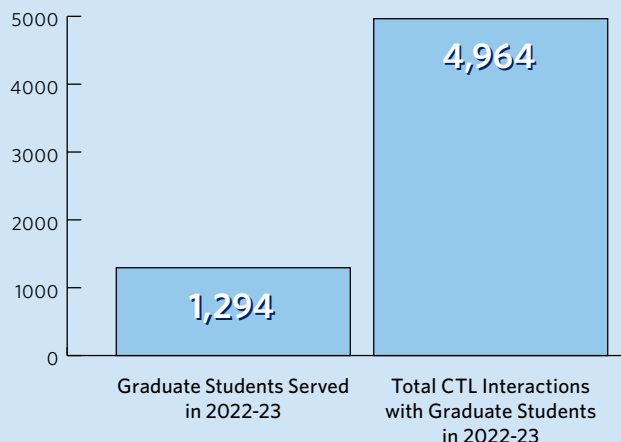**58 interactions with external visitors**

44 CTL-developed software applications
with 1.3 million users and 4.3 million page views

Service to Faculty

- 1,548 — Faculty Served in 2022-23
- 4,191 — Total CTL Interactions with Faculty in 2022-23
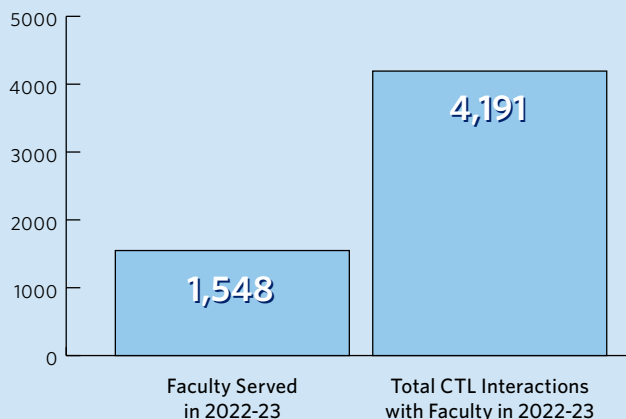
Service to Graduate Students

- 1,294 — Graduate Students Served in 2022-23
- 4,964 — Total CTL Interactions with Graduate Students in 2022-23

CTL-Wide Accomplishments

Celebration of Teaching and Learning Symposium

The Office of the Provost and the Center for Teaching and Learning welcomed the Columbia community to the Celebration of Teaching and Learning Symposium on March 21 and March 23, 2023 to celebrate the ways faculty and students have transformed their courses and pedagogies.

On March 21, a faculty panel and celebratory reception was held in Low Library. The panel, "Celebrating Teaching Transformations at Columbia: A Faculty Panel," featured four faculty members: Maura Abbott, Assistant Dean of Clinical Affairs and Associate Professor of Nursing; Thomas Groll, Senior Lecturer in the Discipline of International and Public Affairs; Devon Rupley, Assistant Professor of Obstetrics and Gynecology; and Katja Vogt, Professor of Philosophy. Each reflected upon their teaching innovations and the insights they gained from pandemic teaching practices. These reflections were an extension of their contributions to the online guide, *Teaching Transformations: Faculty Reflections and Insights on Pandemic Practices*, which launched in the Fall of 2022 from the Office of the Provost and the Center for Teaching and Learning. To read more about the Teaching Transformations guide, see the Faculty Programs and Services section on page 30.

At the celebratory reception, Provost Mary Boyce recognized faculty who contributed to the Teaching Transformations guide, the Provost's Senior Faculty Teaching Scholars, and the recipients of the Provost's Teaching and Learning Grants.

On March 23, three online panels were held:

- **"Faculty Innovations through Provost's Teaching and Learning Grants: A Panel Conversation"** with Jean-Marie Bradford-Alves, Associate Professor of Psychiatry; Ari Goldman, Professor of Journalism; Gregory Khalil, Adjunct Assistant Professor of Journalism; and Drew Youngren, Lecturer in the Discipline of Applied Mathematics

Provost **Mary Boyce** gives remarks to recognize faculty contributions and to celebrate teaching and learning at Columbia.

- **"Branching Out: Enhancing the Scholarship of Teaching and Learning through Learning Analytics and Applied Learning Sciences"** with Samantha Garbers, Associate Professor, Population and Family Health, Mailman School of Public Health; Roxanne Russell, Director of Online Education, Mailman School of Public Health; Tugce Bilgin Sonay, Lecturer, Ecology, Evolution and Environmental Biology and Columbia Science Fellow; and Joshua Friedman, Ph.D. Candidate, Cognitive Science and Education, Teachers College

"Celebrating Teaching Transformations at Columbia: A Faculty Panel" at the Celebration of Teaching and Learning Symposium.

148 participants in the 2023 Symposium.

- **"Taking the Lead: Developing Agency as a Graduate Student Instructor"** with Tylar Colleluori, Ph.D. Candidate in Italian; Simone Paci, Ph.D. Candidate in Political Science; and Sara Samuel, Ph.D. Candidate in Sociomedical Sciences

Provost **Mary Boyce**, Senior Vice Provost **Soulaymane Kachani**, and CTL Executive Director **Catherine Ross** with some of the Provost's Senior Faculty Teaching Scholars and Teaching Transformations faculty contributors at the Symposium.

To watch recordings of the event: https://ctl.columbia.edu/about/2023-symposium/

Advancing Mentorship Practices

All Columbia graduate students and postdocs belong at the University and should expect to be supported throughout their time at Columbia. Faculty and research officers play an important role in welcoming graduate students and postdocs into Columbia's academic community and ensuring their success over time. Mentoring relationships are key to ensuring that they are able to achieve their goals while learning and conducting research. This new initiative, hosted by the Office of the Provost and the Center for Teaching and Learning, is intended to provide faculty and research officers with the support they need to be effective mentors of graduate students and postdocs by cultivating effective, efficient, and inclusive mentoring practices. Over the 2022-23 academic year, mentors were invited to the events below.

In Fall 2022, Columbia hosted a virtual keynote and a workshop facilitated by Lisa Fain, CEO of the Center for Mentoring Excellence and co-author of *The Mentor's Guide, Third Edition* (2022), and *Bridging Differences for Better Mentoring: Lean Forward, Learn, Leverage* (2020).

- **Keynote: Bridging Differences for Better Mentoring: Creating an Inclusive Learning Environment One Relationship at a Time** (September 28)**:** In this interactive keynote, participants learned how mentoring can help drive inclusion, why talking about difference in mentoring relationships is essential, and how to create transformative mentoring relationships that have an impact for mentors and

mentees. Participants came away with new insights and tips they could apply to improve their mentoring relationships right away.

- **Workshop: Bridging Differences for Better Mentoring: Inclusive Mentoring Skills** (December 7)**:** Participants learned how to create effective mentoring relationships by building trust and encouraging open and authentic conversations. This interactive workshop equipped Columbia instructors with the skills and knowledge to structure their mentoring relationships, create accountability, and achieve measurable learning outcomes through mentoring.

In Spring 2023, the CTL hosted a virtual performance and conversation with the CRLT Players from the University of Michigan Center for Research on Learning and Teaching (CRLT). The CRLT Players company is made up of performers, directors, practitioners, musicians, playwrights, and educational developers.

- **Everything is Fine!: Mentoring to Support Graduate Student Mental Health** (March 1)**:** Through a dramatized series of conversations between graduate students and their advisors, the CRLT Players explored the impact of structural and interpersonal issues on graduate student mentoring. To examine challenges related to mental health, these theatrical case studies included candid peer-to-peer discussions of personal and academic challenges as well as more formal advisor-mentee meetings. The piece also took into

Columbia faculty mentor **Ruben Gonzalez** and mentee **Korak Kumar Ray** share insights with grad students and postdocs at the *Making the Most of Mentorship* workshop.

ADVANCING **MENTORSHIP** PRACTICES

account the additional challenges presented by the COVID-19 pandemic to graduate student mentoring. Audiences engaged with the performance by thinking through strategies to improve their relationships with mentees via facilitated discussion.

Also in Spring 2023, the CTL collaborated with the Office of Postdoctoral Affairs and the Office of Research Compliance and Training to offer a 90-minute interactive session for Columbia postdocs and graduate students.

- **Making the Most of Mentorship** (March 23): In this workshop, participants learned concrete strategies for identifying and addressing common mentorship challenges. An interdisciplinary group of mentor-mentee pairs shared their approaches to mentoring;

participants then moved into informal conversation with these "model mentorship" pairs. The session ended by identifying on-campus resources and next steps for taking a mentorship relationship to the next level. This session offered pertinent guidance and models for current and future mentees as well as those planning to take on the role of academic mentor during their careers.

To read more about the CTL's work in supporting mentoring, refer to page 32 in the Faculty Programs and Services section.

Learn more about the Advancing Mentorship Practices Initiative: https://ctl.columbia.edu/advancing-mentorship/

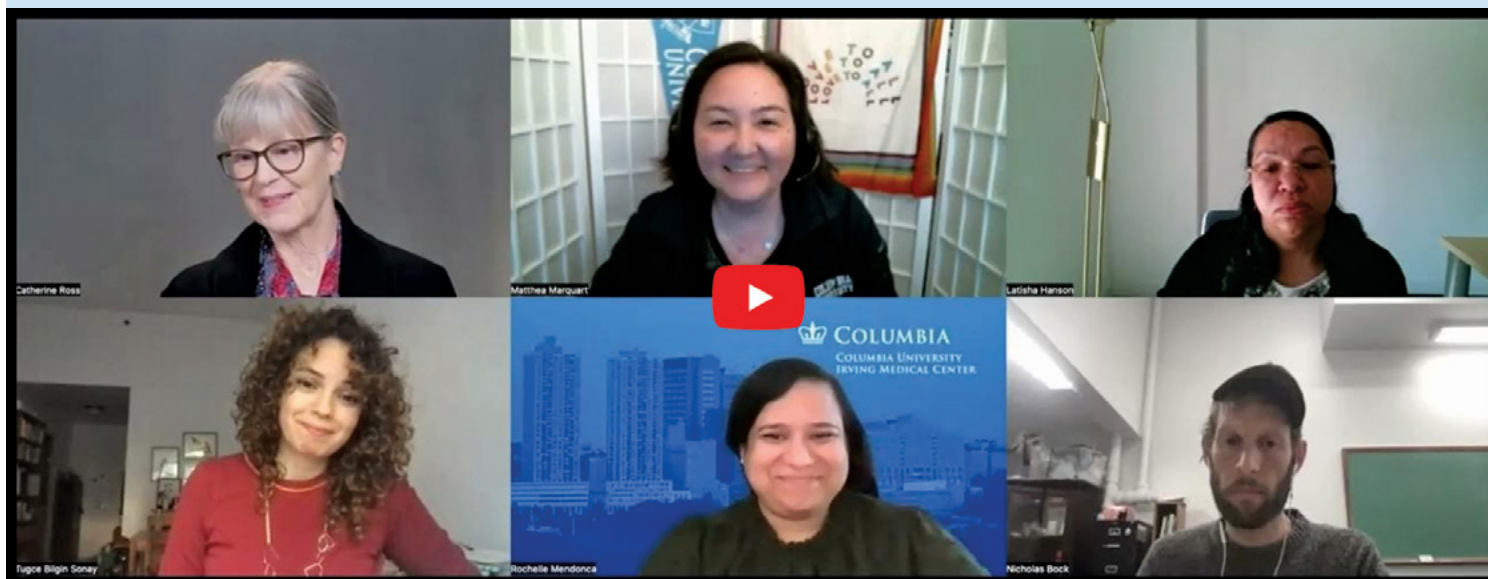## Anti-Racist Pedagogy in Action: A Columbia Faculty Panel

In Fall 2022, the Center for Teaching and Learning and Office of the Vice Provost for Faculty Advancement hosted an anti-racist pedagogy speaker event for the Columbia teaching community.

On October 12, 2022, a panel discussion was held with Columbia University faculty Tugce Bilgin, Lecturer, Ecology, Evolution and Environmental Biology and Columbia Science Fellow; Nicholas Bock, Lecturer in the Discipline of Earth and Environmental Sciences; Latisha Hanson, Assistant Professor of Nursing; Matthea Marquart, Assistant Dean

of Online Education and Senior Adjunct Lecturer at Columbia's School of Social Work; and Rochelle Mendonca, Assistant Professor in the Occupational Therapy program in the Department of Rehabilitation and Regenerative Medicine. During this 90-minute panel discussion, each instructor shared how they enact anti-racist pedagogies in their courses and responded to audience questions.

Watch the recording of the panel: https://ctl.columbia.edu/resources-and-technology/resources/anti-racist-pedagogy/speaker-series/
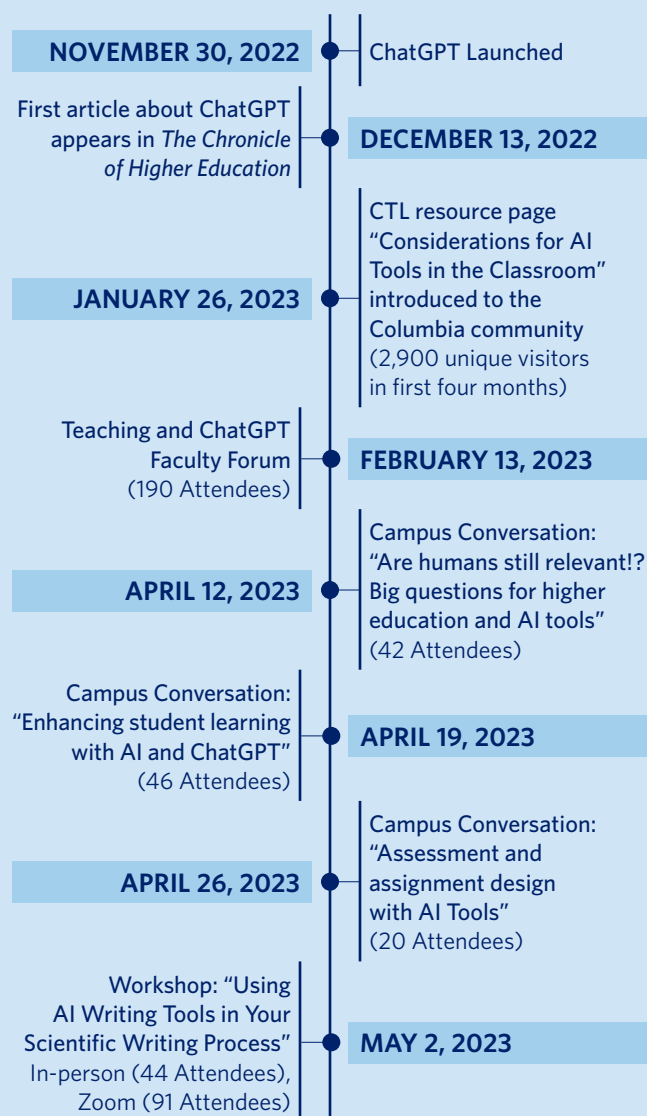

Faculty participants in the Anti-Racist Pedagogy in Action panel.

Support for Artificial Intelligence (AI) Tools in Teaching and Learning

Given the rapid pace of technological innovation and development, higher education is continuously called upon to consider creative approaches to teaching and learning. Most recently, instructors have grappled with the seemingly-overnight introduction of generative AI tools. In response to these new AI tools, the Center for Teaching and Learning offered a range of resources, workshops, discussions, and hosted a university-wide forum for Columbia instructors to offer strategies they might consider for navigating and engaging with these tools in their courses.

CTL RESPONSE TO AI TOOLS

NOVEMBER 30, 2022 — ChatGPT Launched

First article about ChatGPT appears in *The Chronicle of Higher Education* — **DECEMBER 13, 2022**

JANUARY 26, 2023 — CTL resource page "Considerations for AI Tools in the Classroom" introduced to the Columbia community (2,900 unique visitors in first four months)

Teaching and ChatGPT Faculty Forum (190 Attendees) — **FEBRUARY 13, 2023**

APRIL 12, 2023 — Campus Conversation: "Are humans still relevant!? Big questions for higher education and AI tools" (42 Attendees)

Campus Conversation: "Enhancing student learning with AI and ChatGPT" (46 Attendees) — **APRIL 19, 2023**

APRIL 26, 2023 — Campus Conversation: "Assessment and assignment design with AI Tools" (20 Attendees)

Workshop: "Using AI Writing Tools in Your Scientific Writing Process" In-person (44 Attendees), Zoom (91 Attendees) — **MAY 2, 2023**

Teaching and ChatGPT Forum

On February 13, 2023, the Center for Teaching and Learning hosted a "Teaching and ChatGPT Forum" for the Columbia community, in which contributors shared resources and facilitated an informal conversation about AI tools, specifically ChatGPT, and its implications in the classroom. The forum was moderated by Amanda Irvin, Senior Director of Faculty Programs and Services at the CTL and featured contributions from:

- **Kathy McKeown**, Henry and Gertrude Rothschild Professor of Computer Science and Founding Director of Columbia's Data Science Institute
- **Melanie Subbiah**, Ph.D. Student in Computer Science and a lead author of a paper on an early iteration of ChatGPT
- **Nicole Wallack**, Director of the Undergraduate Writing Program and Senior Lecturer in the Discipline of English and Comparative Literature
- **Victoria Malaney-Brown**, Director of Academic Integrity for Columbia College and the Fu Foundation School of Engineering and Applied Science

"This forum offered a refreshingly lucid and thoughtful overview of the opportunities and challenges associated with ChatGPT and other generative AI tools. It was so helpful to have colleagues across the university with expertise in computer science, writing instruction, and academic integrity guide us in thinking about the capabilities and shortcomings of these tools and how we might use them effectively in our teaching. I walked away with a much clearer understanding of how generative AI might be valuable in supporting students' curiosity and critical thinking skills and of how best to encourage students to use these tools judiciously."

— **Caroline Marvin**
  Dean of Academic Affairs, School of General Studies

Tim Requarth discusses using AI writing tools in the scientific writing process with Columbia instructors.

Campus Conversations: Teaching with AI Tools

The Center for Teaching and Learning hosted a series of campus conversations in April 2023 that engaged the Columbia teaching community in discussion around AI Tools in higher education. These thematic conversations interrogated emerging questions, including: the potential for AI tools to enhance student learning, the function of writing in a world with ChatGPT, considerations for assessment of learning and assignment design when incorporating AI tools, and the importance of human engagement in teaching and learning. These themes were spread out over three sessions:

- Are Humans Still Relevant!? Big Questions for Higher Education and AI Tools (April 12)
- Enhancing Student Learning with AI and ChatGPT (April 19)
- Assessment and Assignment Design with AI Tools (April 26)

Using AI Writing Tools in Your Scientific Writing Process

On May 2, 2023 Columbia faculty and graduate student instructors were invited to a seminar and workshop with Tim Requarth, Lecturer in Science and Writing at NYU Grossman School of Medicine, to explore using AI writing tools in the scientific writing process. This event was co-sponsored by the Fu Foundation School of Engineering and Applied Science, Teachers College, the Center for Teaching and Learning, and the departments of Biological Sciences and Statistics.

In this seminar, participants explored the power and potential pitfalls of AI writing tools like ChatGPT, discussed how they can streamline their scientific writing process, and addressed ethical and responsible use of AI assistance. The event also included a workshop in which participants identified a problem in a current writing project and came up with a strategy to tackle it using an AI-assisted writing tool.

Provost's Senior Faculty Teaching Scholars

The Provost's Senior Faculty Teaching Scholars work in partnership with the CTL to support, improve, and innovate the culture of teaching and learning within their own departments and schools as well as across campus. Deans nominate senior faculty who are outstanding teachers as well as well-respected researchers in their disciplines.

The 2022-23 Provost's Senior Faculty Teaching Scholars were as follows:

- **Laurel Abbruzzese**, *Rehabilitation and Regenerative Medicine in Physical Therapy; Vagelos College of Physicians and Surgeons*
- **Heidi Allen**, *School of Social Work*
- **Terence D'Altroy**, *Anthropology; Arts and Sciences, Social Sciences*
- **Helen de Pinho**, *Heilbrunn Department of Population and Family Health; Mailman School of Public Health*
- **Stuart Firestein**, *Biological Sciences; Arts and Sciences, Natural Sciences*

- **Christine Hendon**, *Electrical Engineering; Fu Foundation School of Engineering and Applied Science*
- **Tiffany Murano**, *Emergency Medicine; Vagelos College of Physicians and Surgeons*

Below is a highlighted project by Provost's Senior Faculty Teaching Scholar Terence D'Altroy.

Professor D'Altroy worked with his undergraduate students on developing an inventory and registry of about 200 ceramic vessels recovered by Professor William Duncan Strong during his research in Peru in the 1940-50s. Over the academic year, the students learned how to create a digital archive of the entire set, recording the vessels (form, decoration, cultural affiliation), photographing them informally, and then linking them to publications by Strong and his colleagues. The intention of the project was to make the archives available for professional and academic research and teaching in the future.

Professor **Terence D'Altroy** with his undergraduate students.

Thank-a-Prof / Thank-a-TA Initiative

The Thank-a-Prof / Thank-a-TA initiative celebrates impactful teaching and learning at Columbia University and recognizes professors and TAs for their contributions. In the 2022-23 academic year, students across Columbia's departments and campuses submitted 968 thank-you notes, which were forwarded to professors and TAs.

Learn more: https://ctl.columbia.edu/thank-a-prof/

"Thank you so much for all of the support and motivation that you have expressed to me throughout the past two semesters. It was a true pleasure getting to know you and learn from you in Integration of Science and Practice. You consistently created a space where I (and all of my classmates) felt comfortable enough to voice our opinions and challenge critical public health topics. You made a lasting impact on my time at Mailman, and I cannot thank you enough for that. I hope our paths continue to cross as I begin my second year at Mailman, and beyond. I appreciate your teaching and compassion so much!"

— Student **Emma Walinsky** writing to **Thelma Mielenz**, *Assistant Professor of Epidemiology* (COURSE: **Integration of Science and Practice**, Spring 2023)

"Thank you so much for being my Literature Humanities Professor. You make scary, difficult texts exciting, fun, and full of joy. Your introductions to the texts and analysis always gives us springboards for discussions that even last after the class—I find myself with my classmates-turned-friends, talking about colonization in Odysseus' relationship with the cyclopes, or about Sappho's clever and cutting wit alongside Gloria Gaynor's "I Will Survive." You breathe new life into these texts, and inspire me to explore connections between my interests and our assignments, especially with your creative prompts. Thanks for making this course so much fun and so much learning."

— Student writing to **Jessica Collins**, *Associate Professor of Philosophy* (COURSE: **Literature Humanities**, Fall 2022)

Columbia students stop by the CTL Thank-a-Prof / Thank-a-TA table in Butler Library.

# *Dead Ideas in Teaching and Learning* Podcast

This year, the CTL released seasons 5 and 6 of its podcast, *Dead Ideas in Teaching and Learning*, hosted by CTL Executive Director Catherine Ross. The mission of the podcast is to encourage instructors, students, and leaders in higher education to reflect on and change what they believe about teaching and learning. In each episode, guests are invited to share their discoveries of "dead ideas"—ideas that are not true but that are often widely believed and embedded in the pedagogical choices we make.

The theme of the podcast series originates from the article "The Tyranny of Dead Ideas in Teaching and Learning" (*The Sociological Quarterly*, 2011) by Diane L. Pike, Professor of Sociology at Augsburg University. Episodes are released bi-weekly and are approximately 30 minutes in length.

Season 5 focused on how rigor can be defined and enacted across higher education settings. Season 6 explored why dead ideas are so persistent, what role the science of learning can play in dispelling dead ideas, and why it's so difficult for instructors and students to change their beliefs about teaching and learning.

Guests included Columbia faculty, students, and staff, as well as notable external authors and experts.
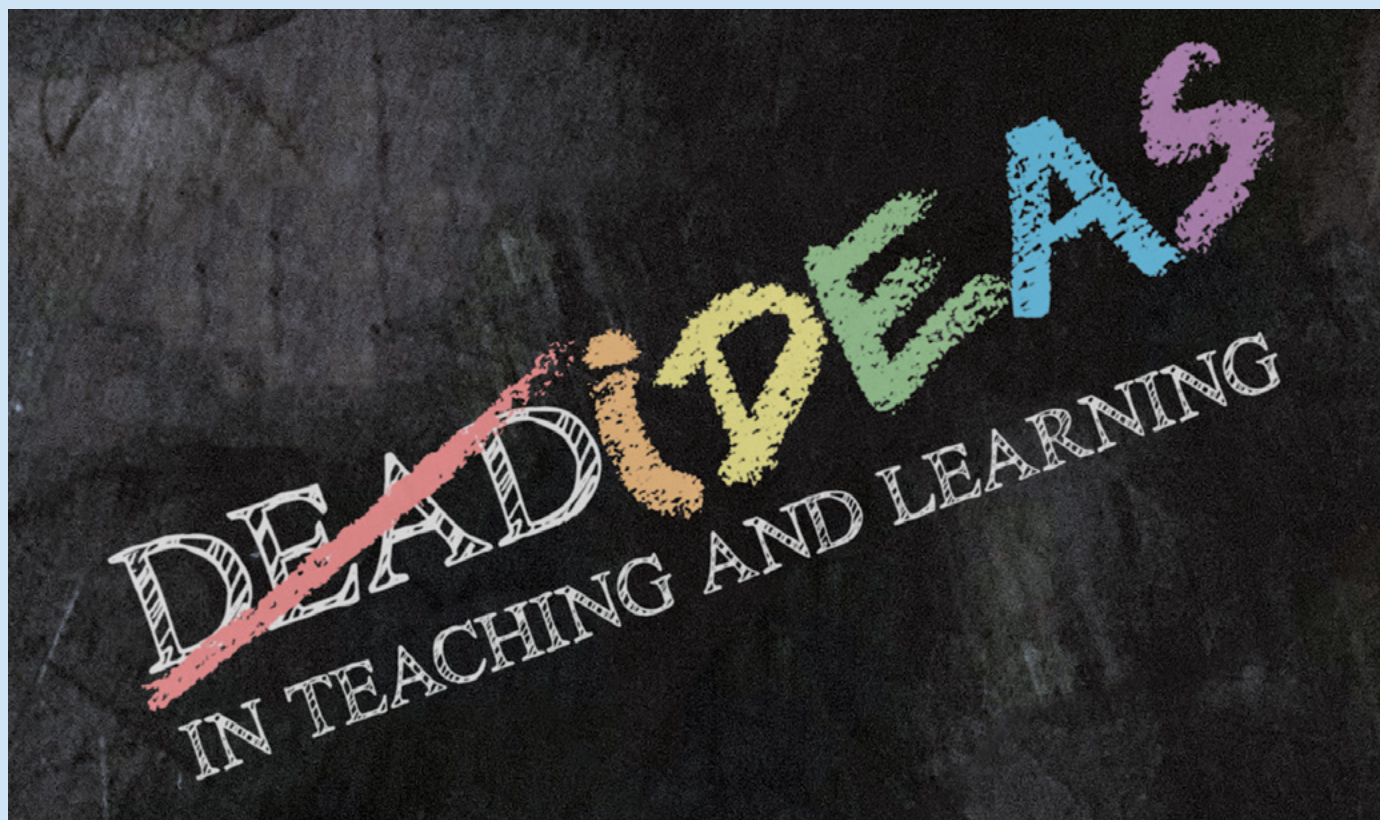
16,038 podcast downloads for Seasons 5 and 6

Season 5, Fall 2022:

- "**You Can't Ignore That a Pandemic Happened**" with John Warner, affiliate faculty at the College of Charleston and author of the Inside Higher Ed blog, "Just Visiting"

- "**Rigor as Inclusive Practice**" with Jamiella Brooks, Director of Student Equity and Inclusion Initiatives at the University of Pennsylvania Carey Law School; Julie McGurk, Director of Faculty Teaching Initiatives at Yale University's Poorvu Center for Teaching and Learning

- "**Rigor as Engagement**" with David Helfand, Professor of Astronomy at Columbia University

- "**Rigor as Liberation**" with Elwin Wu, Professor at Columbia University's School of Social Work (CSSW), and Kelsey Reeder, a Clinical Social Worker and Ph.D. student in Advanced Practice at CSSW

- "**Rigor as Equity**" with Jean-Marie Alves-Bradford, Associate Professor of Psychiatry, Associate Dean for Medical School Professionalism in the Learning Environment; Hetty Cunningham, Associate Professor of Pediatrics, Director for Equity and Justice in Curricular Affairs, and co-director of the Anti-Racism Coalition at Vagelos College of Physicians and Surgeons

- "**Rigor as Skill Building**" with Larry Jackson, Associate Dean of Academic Affairs and Director of the Center for the Core Curriculum at Columbia College

- "**Rigor and Assessment from the Student Point of View**" with Maryam Pate and Olivia Schmitt, Columbia University undergraduate students who serve as Teaching and Learning Consultants as part of the CTL's Students as Pedagogical Partners initiative

Season 6, Spring 2023:

- "**Why Are Dead Ideas So Persistent?**" with John Mahoney, Senior Lecturer at Australian Catholic University and the University's Academic Lead for the Higher Education Learning and Teaching Academy

- "**How the Science of Learning Can Be Leveraged for Change**" with Kelly Hogan and Viji Sathy, award-winning instructors at the University of North Carolina at Chapel Hill and authors of the book, *Inclusive Teaching: Strategies for Promoting Equity in the College Classroom* (2022)

- "**A Neuroscientist's Perspective on Student Engagement**" with Alfredo Spagna, Lecturer in the Discipline of Psychology at Columbia University

- "**Teaching Students About the Science of Learning**" with Todd Zakrajsek, Associate Professor at The University of North Carolina, Chapel Hill, Director of the International Teaching Learning Cooperative, and author of *The New Science of Learning* (2022)

- "**Dead Ideas in Intercultural Development**" with Tara Harvey, Founder of True North Intercultural

- "**The Science of Learning in Action**" with Samantha Garbers, Associate Professor in the Heilbrunn Department of Population and Family Health at the Columbia University Mailman School of Public Health; Adam Brown, Program Director of Columbia's Science of Learning Research Initiative (SOLER)

- "**The Students Have the Final (and Best!) Word on the Science of Learning**" with Columbia University undergraduate students, Emily Glover and Kyle Gordon, who serve as Teaching and Learning Consultants as part of the CTL's Students as Pedagogical Partners initiative

To learn more and listen to the podcast:
https://ctl.columbia.edu/podcast/

"The podcast has reminded me of the teaching principles that make me excited about the work, and of the urgency to pursue it...thanks so much for a great podcast—it's a real contribution to teaching and learning in higher education."

— **Anton Borst**
  Senior Learning Designer, New York University

Office of Teaching, Learning, and Innovation

The Office of Teaching, Learning, and Innovation (OTLI) oversees the Center for Teaching and Learning and is responsible for administering the Provost's initiatives in teaching and learning, including the Office of the Provost Teaching and Learning Grants (learn more about the grants on page 22). The Office leads efforts in online education, provides support for schools to offer new courses and extend existing courses and programs to audiences around the world, reviews new and existing online and hybrid degree and non-degree programs, and proposes, reviews and disseminates policies on teaching and online education. Below are highlighted OTLI programs from the 2022-23 academic year.

Science of Learning Research Initiative (SOLER)

SOLER is a research division of OTLI dedicated to facilitating the systematic generation of insights about teaching and learning in the context of Columbia courses and degree programs. SOLER utilizes three interrelated scientific approaches—Scholarship of Teaching and Learning (SoTL) Research, Learning Analytics, and Applied Learning Sciences—while building the Science of Learning community.

In 2020, SOLER launched the Provost's SOLER Seed Grants (PSSG) program to fund and support faculty-led Science of Learning projects featuring a mix of the aforementioned research modes. PSSG awardees receive up to $5,000 in funding and extensive in-kind support. SOLER lowers the barriers for faculty to perform impactful Science of Learning work within their departments by managing and collaboratively developing project elements such as study design, research instrument development, Institutional Review Board approval, data security and analysis, and dissemination of results. Since 2020, SOLER has continued to expand the PSSG program, having now funded a total of 14 distinct projects led by faculty from across the University, including five new projects committed in 2023. Multiple projects have been conducted in collaboration with the CTL and others with Columbia University Information Technology's Emerging Technologies Consortium.

SOLER achieved or participated in seven major developments in the 2022-23 academic year:

1. The addition of three new members to SOLER's faculty advisory committee: Samantha Garbers, Associate Professor of Population & Family Health, Mailman School of Public Health; Sarah Hansen, Senior Lecturer in the Discipline of Chemistry; and Caroline Marvin, Dean of Academic Affairs, School of General Studies.

2. The expansion of the SOLER Student Assistants (SSA) program, which connects graduate students from across the University to SOLER projects and mentorship from OTLI staff. Since the program's inception, eight students have served on the team.

3. The first annual SOLER Summer Institute in July 2022, a one-day on-campus event bringing together the new cohort of PSSG awardees, faculty advisory committee members, SSAs, and other affiliates of SOLER. The event featured research presentations, workshop activities, and open discussion.

4. A founding role in the creation of a new Ivy+ working group for discussion of strategic and organizational topics related to the Science of Learning. The inaugural session, convened in June 2023, featured staff engaged in SoTL Research and related activities from five peer institutions: Brown University, The University of Pennsylvania, Johns Hopkins University, Massachusetts Institute of Technology, and The University of Chicago.

5. The establishment of a regular journal club series attended by the extended SOLER community, initially held periodically, and then monthly starting in March 2023. The group discusses primary research articles as well as essays about fundamental and timely issues in the Science of Learning and university administration.

6. Hosting a panel for the March 2023 Celebration of Teaching and Learning Symposium. Program Director Adam Brown hosted a virtual panel featuring a multi-year PSSG-awarded team from the Mailman School of Public Health (Samantha Garbers, mentioned in (1) above; and Roxanne Russell, Assistant Dean of Digital Learning), and the interdisciplinary team of Joshua Friedman, Teachers College doctoral student, and Tugce Bilgin, Lecturer in the Frontiers of Science program in the Columbia College Core Curriculum.

Joel Podolny, CEO of Honor Education, speaks at the Provost's Conversation on Online Learning.

7. Hosting the April 2023 information session for the PSSG program's latest application cycle. Two previous PSSG faculty awardees—Lecturers Amy Werman (School of Social Work) and Vincent FitzPatrick (Biological Sciences)—shared their insights and presented their projects. Notably, the 2023 cycle continued the integration of PSSGs into the broader Provost's Teaching and Learning Grants framework.

To learn more about SOLER: https://soler.columbia.edu

Provost's Conversation on Online Learning

Provost's Conversations on Online Learning (PCoOL) feature public talks by leading experts and peers on the future of education, specifically around online education. Through such conversations, we hope to learn and share knowledge to enhance teaching and learning efforts at Columbia, not only online but also on campus to ensure the richest and most dynamic educational experience for all of our students. Past PCoOL guests have included the CEOs of edX, OpenClassrooms, 2U, and Coursera, and leaders in online education from the University of Pennsylvania and the University of Illinois Urbana-Champaign.

This year's Provost's Conversation on Online Learning (PCoOL) featured a talk from co-founder and CEO of Honor Education, Joel Podolny, in April 2023. Prior to starting Honor Education in May 2021, Joel was Vice President at Apple and the founding Dean of Apple University, and before that, served as Dean and Professor of Management at the Yale School of Management. Honor Education is a teaching and learning platform for colleges, universities, and corporations, thoughtfully designed to drive collective engagement, equity, and curricular improvements in all educational settings.

A central question during Joel's tenure as Dean of the Yale School of Management and then Dean of Apple University was what makes one piece of learning content better than another—better at clarifying a particular point, prompting deeper reflection, or driving a desired change in someone's behavior. Why is one fact, image, or story better than others that could have been chosen? When COVID hit, these questions took on added importance and urgency as it became clear that the teacher was becoming decentered in the learning experience, as reflected, of course, in the term remote teaching. And a new question arose: how does one best create collective engagement around learning content when the teacher is not as front and center to drive it? Taken together, these questions ultimately helped shape the vision for the digital platform of the company that he leads today, Honor Education. During this conversation, Joel shared the lessons he has learned over the past 20 years addressing these questions.

Learn more and watch the recordings:
https://online.columbia.edu/pcool/

Provost's Teaching and Learning Grants

The Office of the Provost provides funding opportunities through grant programs for faculty interested in integrating new educational methods and technologies into their classrooms and learning environments. The CTL offers logistical, organizational, and instructional support for faculty awarded funding from the Office of the Provost. For more details on the CTL's involvement in the Provost's Teaching and Learning Grant projects, see page 66 in the Instructional Technologies section.

Innovative Course Design Grants

The Office of the Provost's Innovative Course Design Grants provide faculty with funds of up to $20,000 and support from the CTL to develop and implement innovative pedagogies and technology-rich learning strategies for Columbia courses.

SPRING 2022 AWARDEES

Below is the list of faculty who released courses in the 2022-23 academic year with support or advice from the CTL.

Christian Braneon, *Climate Scientist, Columbia Climate School*
Natalie Unwin-Kuruneri, *Senior Director of Academic Initiatives, Columbia Climate School*
Alix Schroder, *Associate Director of Academic Initiatives, Columbia Climate School*
PROJECT: "Bringing Environmental and Climate Justice Tools into the Classroom: Using Inquiry-Based Learning and Systems Thinking Interventions to Enhance Teaching"

Leah Hooper, *Senior Director of Educational Initiatives; Associate in Sociomedical Sciences, Mailman School of Public Health*
Christine Mauro, *Assistant Professor of Biostatistics, CUIMC*
PROJECT: "A Growth Mindset Intervention for a Graduate-level Biostatistics Course: Research-based Strategies to Mitigate Threats to Academic Belonging"

Jonathan Cain, *Associate University Librarian, Research and Learning*
Jeremiah Mercurio, *Interim Director, Digital Scholarship and Head, Humanities and History*
Jeremiah Trinidad-Christensen, *Head, Research Data Services*
Moacir P. de Sá Pereira, *Research Data Librarian, Columbia University Libraries Research Data Services and the Columbia University Center for Teaching and Learning*
PROJECT: "Exceptional Scholarship with Research Data"

Rachel Cummings, *Assistant Professor of Industrial Engineering and Operations Research, Fu Foundation School of Engineering and Applied Science*
PROJECT: "Introducing Case-based Teaching into Interdisciplinary Data Privacy Education"

Ari Goldman, *Professor of Journalism, Graduate School of Journalism*
Gregory N. Khalil, *Adjunct Assistant Professor, Graduate School of Journalism*
PROJECT: "Covering Religion"

Thomas Groll, *Senior Lecturer of International and Public Affairs, School of International and Public Affairs*
PROJECT: "Assignment Builder for EconPractice and Adaptive E-Learning Assignments"

Agnieszka Legutko, *Lecturer in Yiddish, Department of Germanic Languages*
PROJECT: "Building an Online Archive: A Meaningful Engagement with the Past in a Literature Course"

Rochelle Mendonca, *Assistant Professor, Rehabilitation & Regenerative Medicine (Occupational Therapy), Vagelos College of Physicians and Surgeons*
PROJECT: "Developing and Implementing an Assistive Technology and Modifications Course to Build Skills and Competency in Technology-Based Interventions for Graduate Occupational Therapy Students"

Yousef Nouhi, *Senior Lecturer in Arabic, Department of Middle Eastern, South Asian & African Studies*
PROJECT: "Proposal for Innovative Course Design (Standard Arabic for Heritage Speakers)"

Zhongqi Shi, *Senior Lecturer in Chinese, Department of East Asian Languages & Cultures*

PROJECT: "Use of Video-Based Reflection and Interactive Feedback to Improve Speaking in Foreign Language Classes"

Martha Sliwinski, *Associate Professor of Rehabilitation and Regenerative Medicine (Physical Therapy), Vagelos College of Physicians and Surgeons*

PROJECT: "Developing Capacity and Digital Modules to Expand Self Compassion and Mindfulness Practice for Health Practitioner Students"

Drew Youngen, *Lecturer of Applied Physics & Applied Mathematics, Fu Foundation School of Engineering and Applied Science*

PROJECT: "3Demos: Bringing Interactivity to Visualizations in Calculus"

SPRING 2023 AWARDEES

Below is the list of projects that will be developed and released in the 2023-24 academic year with support or advice from the CTL.

Heidi Allen, *Associate Professor, School of Social Work*
Brooke Stott, *Lecturer, School of Social Work*
Amy Werman, *Lecturer, School of Social Work*
PROJECT: "MDMA-Assisted Therapy Simulation Videos"

Michela Biasutti, *Adjunct Professor of Climate, Lamont-Doherty Earth Observatory*
Mingfang Ting, *Professor of Climate, Lamont-Doherty Earth Observatory*
PROJECT: "Using Flipped Classroom Pedagogy to Enhance Individualized Learning for a Diverse Student Body in the Interdisciplinary Climate and Society MA Program"

Seyhan Erden, *Lecturer, Economics*
PROJECT: "An Online Platform for Econometrics: Visual Graphical Interactive Simulations"

Shivani Ghoshal, *Assistant Professor, Neurology, CUIMC*
Rini Banerjee Ratan, *Berkowitz Family Professor of Women's Health (Obstetrics and Gynecology), CUIMC*
Michelle Bell, *Assistant Professor, Neurology, CUIMC*
PROJECT: "The Professional Pivot Pilot Study: A Simulation-Enhanced Curriculum to Improve Medical Student Communication Frameworks in Hierarchal Bias"

Thomas Groll, *Senior Lecturer, School of International and Public Affairs*
PROJECT: "EconPractice for Microeconomics"

Joseph Howley, *Associate Professor, Classics*
PROJECT: "New course: 'Aristotle and AI: Thinking Tools from Antiquity to Today'"

Catherine McManus, *Assistant Professor, Surgery, CUIMC*
Sophie Mayeux, *Postdoctoral Residency Fellow, Surgery, CUIMC*
PROJECT: "Using Virtual Reality to Improve Medical Students' Preparedness for the Operating Room"

Danielle Struble-Fitzsimmons, *Assistant Professor, Rehabilitation and Regenerative Medicine (Physical Therapy), CUIMC*
PROJECT: "Incorporating Simulation and Case-Based Learning Strategies to Improve DPT Integumentary Education"

Gregory J. Wawro, *Professor, Political Science*
PROJECT: "Innovative Course Design Proposal for 'Data Science for Political Analytics'"

Innovative Course Module Design Grants

The Innovative Course Module Design Grants provide support to faculty who are interested in experimenting with a new pedagogical strategy or tool. Recipients received in-kind support from the CTL and up to $2,000 for a one semester period.

SPRING 2022 AWARDEES

Below is the list of projects developed and released in the 2022-23 academic year with support or advice from the CTL.

Heather Butts, *Lecturer, Health Policy and Management, Mailman School of Public Health*
PROJECT: "Public Health Law, Ethics, and Regulations Module for Students and Community Members"

Ashley Graham-Perel, *Assistant Professor of Nursing, CUIMC*
PROJECT: "Colloquium for Nursing History and Anti-Racism Affirmation"

Natasha Mehta, *Assistant Professor of Medicine, Vagelos College of Physicians and Surgeons*
Walkiria Jimenez-Loo, *Assistant Professor, Medicine, Vagelos College of Physicians and Surgeons*
Melissa Patterson, *Assistant Professor of Medicine, Division of Palliative Care, Vagelos College of Physicians and Surgeons*

Laura Abbruzzese, *Associate Professor, Rehabilitation and Regenerative Medicine, CUIMC*

PROJECT: "An Educational Initiative to Reduce Falls and Increase Mobility Assessment: Enhancing Geriatric Education in the Medical Students Primary Care Clerkship"

Kristie Schlauraff, *Lecturer, English & Comparative Literature*

PROJECT: "Writing as Curation: Enhancing Undergraduate Research with Museum Objects"

Ovita Williams, *Lecturer, School of Social Work*
Susan Witte, *Professor, Social Work*

PROJECT: "An Informed Perspective: Awareness and Allyship for Disability Justice"

Amy Yu, *Assistant, Clinical Neurology, Postdoctoral Clinical Fellow in the Department of Neurology, Vagelos College of Physicians and Surgeons*

PROJECT: "Asynchronous Learning Through Online Modules in Clinical Neurology"

SPRING 2023 AWARDEES

Below is the list of projects that will be developed and released in the 2023-24 academic year with support or advice from the CTL.

Kirkwood Adams, *Lecturer, English and Comparative Literature*

PROJECT: "Incorporating Generative A.I. into University Writing Teaching Digital Literacy, Genre Awareness, & Close Reading"

Tyra M. Banks, *Assistant Professor, Rehabilitation and Regenerative Medicine (Occupational Therapy), CUIMC*

PROJECT: "Modular Integration of Anti-Racist Pedagogy into Foundational Occupational Therapy Coursework Through Active Learning"

Ashli B. Carter, *Lecturer in the Discipline of Management in the Faculty of Business, Graduate School of Business*

PROJECT: "Collaborative Art & Play as Inclusive Practice: Redesigning the Leading Teams Course Module with AI-generated Art"

Robert J. Morais, *Lecturer, Graduate School of Business*
Kamel Jedidi, *Jerome A. Chazen Professor of Global Business, Graduate School of Business*

PROJECT: "Applying AI to Teaching Market Intelligence"

Faculty Spotlight

Ashley Graham-Perel, *Assistant Professor of Nursing, Interim Director of Cultural Affairs*

Ashley Graham-Perel was a recipient of a Provost's Teaching and Learning Grant in Innovative Course Module Design. Dr. Graham-Perel worked with the Center for Teaching and Learning, and Teaching Assistants Lauren DeVaughn and Hodaya Lightstone, to develop the "Colloquium for Nursing History and Anti-Racist Affirmation," a two-part lecture series that was embedded in Fall 2022 into the N5800 Nursing Topics course required of all 225 Masters Direct Entry (MDE) students. Through the colloquium, nursing faculty and students examine racism in the history of the nursing profession, reflect on how it informs their nursing practice, and explore measurable vestiges of racism in current healthcare practice.

Why did you design this new course?
What challenge did you face?

People are often overwhelmed when trying to understand and resolve racism and inequities in healthcare because they isolate the problems to the present. Only through understanding the past and nursing history can we better define the problems of inequities in healthcare and develop solutions as practitioners. In the professional growth and development of future nurses, one must understand where the profession comes from and the professional legacy one is inheriting.

What is the intervention that you implemented and how does it enhance the student learning experience?

The "Colloquium for Nursing History and Anti-Racist Affirmation" is a two-part lecture series. The series promotes active learning through discussion of nursing history and employs students with the skills to further explore history while addressing current racial inequities in healthcare. The strategy uses micro learning and asynchronous video vignettes to initiate incorporation of nursing history into nursing curriculum. With digitized nursing history, students are exposed to historical nursing content that customarily requires archival research and experience in historical research. The production and digitization of the historical content provides accessibility of content for future use. In addition, the colloquium series serves as a faculty guide for facilitating historical content and discourse in nursing curriculum. The key interventions included the two didactic lectures on nursing history and the socially responsible nurse, reflection assignments, and two supplemental video vignettes on measurable instances of racism.

What are the goals and objectives for your course?

The key learning outcomes are as follows:

1. Understand the dynamic history of nursing ideas and practices, their implications for patients and health care providers, and the need for lifelong learning. More specifically students will recognize how the history of nursing has contributed to anti-black racism and inequities in healthcare today.

2. Develop chronological thinking skills and comprehension of historical nursing to guide the students in identifying nursing areas that remain unchanged and how it perpetuates continued health inequities.

3. Build on professional identity through revising one's expectations of antiracist nursing practice as a self-identified nurse through actively seeking historical information.

What evidence from your activities and assessments showed the effectiveness of this new course design?

In this colloquium project, student learning outcomes were assessed and evaluated in three methods: through reflection, a narrative essay assignment, and an analysis of web-based engagement of shared supplemental video vignettes.

The main theme in the students' reflective responses was that they did not know the nursing history presented and how racism played a role in our professional identity and practice. There was a spectrum of emotional demonstrations in the students' reflections. Most students demonstrated anger and frustration and voiced appreciation for learning this content. There were some students who voiced that they are eager to learn more about other races and cultures in nursing, as they felt their education on Black nursing history was insufficient.

The engagement of the videos demonstrate an average of 70 views/downloads with at least 60-70 unique viewers from the class (out of 225 students). I believe that the post-series survey was the impetus to watching the videos as there were questions on the survey about the videos. In the future, I may consider releasing the videos earlier and giving the students the opportunity to write about them in their reflective exercises.

Do you have any advice for other faculty who are considering incorporating history or anti-racist learning objectives into their course? Why should they do it? What should they expect?

If there is any faculty considering incorporating history or anti-racist learning concepts into their course, my advice will be to please go for it! The benefits of this course redesign may be reasonably sustained through purposefully addressing the objectives set forth in the colloquium in future nursing courses. Nursing history may be an intimidating topic to incorporate into the curriculum. However, the colloquium in nursing history illuminated the lack of knowledge our nursing students have when it comes to history and that they are interested in learning more about this essential topic. The reflective exercises provided students the opportunity to ponder nursing history and anti-racism affirmations in healthcare, consider the magnitude of this problem, recognize it as a chronological problem and not one that is only related to the present, and lastly consider their professional identities and how nursing history impacts who they are and how they will practice in the future. This education is essential and integrating aspects, even if it is a modicum of nursing history and anti-racism affirmation throughout the curriculum, will make an everlasting and sustained impact on the education of our future nurse leaders.

For the full spotlight:
ctl.columbia.edu/spotlight/ashley-graham-perel/

Guadalupe Ruiz Fajardo, *Senior Lecturer in Spanish, Department of Latin American and Iberian Cultures*
PROJECT: "Samples of Service Encounter Interactions for Elementary Spanish I (A new section for The Columbia Corpus of Spanish Conversations)"

Talha Siddiqui, *Lecturer, Chemistry*
Asa Knox, *Undergraduate Student, Columbia College*
PROJECT: "Organic Chemistry Jumpstart Project"

Meghan Reading Turchioe, *Assistant Professor, School of Nursing*
Suzanne Bakken, *Alumni Professor, School of Nursing*
Sergey Kisselev, *Data Manager, Department of Nursing Scholarship and Research*
PROJECT: "Generative Artificial Intelligence for Nurses (GAIN)"

Massive Open Online Courses (MOOCs) Grants

The Office of the Provost's Massive Open Online Courses (MOOCs) Grants provide faculty with funds of up to $25,000 and support from the CTL to develop innovative online courses. MOOC instructors partner with the CTL on course design, media production, and course delivery. See page 69 to read more about the MOOC listed below.

SPRING 2022 AWARDEE

COURSE: "Frontiers of Science: A Four Course MOOC Series – Part 2"
David Helfand, *Professor of Astronomy*
Ivana Nikolic Hughes, *Senior Lecturer in Chemistry; Director of Frontiers of Science*

Large-Scale Teaching and Learning Grants

The Large-Scale Teaching and Learning Grants supported efforts around teaching initiatives and exploration at the school, department, or program level. Awards provided up to $20,000 per academic year plus in-kind CTL support..

SPRING 2022 AWARDEES

Below is the list of grants completed and released in the 2022–23 academic year with support from the CTL.

Brune Biebuyck, *Director, Columbia Global Centers*
PROJECT: "Recording Studio in Reid Hall"

Monica Lypson, *Rolf H. Scholdager Professor of Medicine, Vice Dean for Education, Vagelos College of Physicians and Surgeons*
Jean-Marie Alves-Bradford, *Director of the Office of Equity, Diversity & Inclusion, Associate Professor of Psychiatry, CUIMC*
PROJECT: "Curriculum Design Workgroups Focusing on Inclusive Teaching Pedagogy Using Backward Design at Vagelos College of Physicians and Surgeons"

Samantha Lu, *Associate Director for International Student Services Office*
David Austell, *Associate Provost and Director for International Student Services Office*
Grace Chang, *Program Manager for International Student Services Office*
PROJECT: "International Students' Onboarding and Immigration Compliance"

Kiran Pandit, *Assistant Professor of Emergency Medicine, Vagelos College of Physicians and Surgeons*
Tiffany Murano, *Vice-Chair of Education, Department of Emergency Medicine, Vagelos College of Physicians and Surgeons*
PROJECT: "A Re-Imagining of Teaching Assessment Systems for Faculty of the Department of Emergency Medicine"

Jonah Rockoff, *Paul Garrett Professor of Public Policy and Business Responsibility; Senior Vice Dean for Curriculum and Programs, School of Business*
Ann Bartel, *Merrill Lynch Professor of Workforce Transformation; Vice Dean for Diversity, Equity, and Inclusion, School of Business*
Michelle V. Hall, *Managing Director, Samberg Institute for Teaching Excellence*
PROJECT: "Fostering Diversity and Racial Equity, and Promoting Inclusive Excellence for Faculty at Columbia Business School"

Below is the list of grants that will be developed in the 2023-24 academic year with support or advice from the CTL.

Sania Anwar, *Ruth Bader Ginsburg Academic Fellow, School of Law*

PROJECT: "Columbia Law School Teaching Assistants Program"

Jeremy Dodd, *Senior Lecturer, Physics*
Rebecca Grossman, *Lecturer, Physics*
Eric Raymer, *Lecturer, Physics*

PROJECT: "Transforming Introductory Physics Education at Columbia: Towards an Active Learning Paradigm"

Kathleen Mullen, *Assistant Professor, School of Nursing*
Heidi Hahn-Schroeder, *Assistant Dean of Academic Affairs, Assistant Professor, School of Nursing*

PROJECT: "Integrating AACN's Essentials: Core Competencies into the Advanced Clinical Management and Leadership Program"

Yi Zhang, *Associate, Industrial Engineering and Operations Research, Fu Foundation School of Engineering and Applied Science*
Kristen Maynor, *Associate Director, Academic and Student Affairs, Industrial Engineering and Operations Research, Fu Foundation School of Engineering and Applied Science*
Jay Sethuraman, *Professor, Industrial Engineering and Operations Research, Fu Foundation School of Engineering and Applied Science*

PROJECT: "Empowering Students Through Project-Based Learning (PBL): Creating a Sustainable and Collaborative Ecosystem"

Provost's Interdisciplinary Teaching Initiatives

Provost's Interdisciplinary Teaching Initiatives are designed to support faculty from different disciplines to work collaboratively on the design and launch of innovative interdisciplinary courses. Emerging from the deliberations of the Provost's Interdisciplinary Working Group, this program awards up to $20,000 to teams of two or more faculty from different departments or schools to develop and offer undergraduate or graduate courses that integrate content and perspectives from different disciplines to enhance student learning.

Below are the projects developed and released in the 2022–2023 academic year with support or advice from the CTL.

Jean-Marie Alves-Bradford, *Associate Professor of Psychiatry, Associate Dean for Medical School Professionalism in the Learning Environment, Vagelos College of Physicians and Surgeons,*
Monica Lypson, *Rolf H. Scholdager Professor of Medicine, Vice Dean for Education, Vagelos College of Physicians and Surgeons*

PROJECT: "Developing an Upstander Curricular Thread throughout the Medical School Curriculum"

David Austell, *Associate Provost and Director of the International Students and Scholars Office*
Samantha Lu, *Associate Director for International Student Services Office*
Grace Chang, *Program Manager for International Student Services Office*

PROJECT: "Building Foundations for Global Leadership"

Jonathan Cain, *Associate University Librarian for Research and Learning, University Libraries*
Jeremiah Mercurio, *Interim Director, Digital Scholarship and Head, Humanities and History*
Jeremiah Trinidad-Christensen, *Head, Research Data Services*

PROJECT: "Expanding Access to Foundations for Research Computing"

Ellen M. Fahey, *Assistant Professor of Nursing, CUIMC*
Letty Moss-Salentijn, *Edward V. Zagarelli Professor of Dental Medicine and Vice Dean for Curricular Innovation and Interprofessional Education, College of Dental Medicine*

PROJECT: "The First Collaborative Patient Encounter 'Communication, Coordination, Collaboration, Becoming a Team'"

Mark Mazower, *Ira D. Wallach Professor of World Order Studies; Director, Columbia Institute for Ideas and Imagination*
Marie d'Origny, *Administrative Director, Columbia Institute for Ideas and Imagination*

PROJECT: "Creating Teaching and Learning Content at Reid Hall, Paris"

Taylor Sewell, *Assistant Professor of Pediatrics, Vagelos College of Physicians and Surgeons*

Carri W. Chan, *Professor of Business and Faculty Director of the Healthcare and Pharmaceutical Management Program, Columbia Business School*

Peter Tollman, *Adjunct Assistant Professor of Business and Executive in Residence, Columbia Business School*

PROJECT: "Healthcare Management, Design, and Strategy (HMDS)"

SPRING 2023 AWARDEES

Below is the list of projects that will be developed and released in the 2023–2024 academic year with support or advice from the CTL.

A. Véronique Charles, *Mellon Teaching Fellow in the Society of Fellows in the Humanities and Lecturer, African American and African Diaspora Studies*

Thomas Dodman, *Associate Professor, French*

Farah Jasmine Griffin, *William B. Ransford Professor of English and Comparative Literature and African-American Studies and Professor of African American and African Diaspora Studies*

PROJECT: "Afro-Francospheres: Working Group for Research & Curriculum Development between the Department of African American and African Diaspora Studies (Morningside) and Reid Hall (Paris)"

Sandra Goldmark, *Senior Assistant Dean of Interdisciplinary Engagement, Climate School*

Laurie Postelwate, *Senior Lecturer, French, Barnard College*

Pam Cobrin, *Senior Lecturer, English, Barnard College*

Melissa Wright, *Executive Director, Barnard Center for Engaged Pedagogy*

PROJECT: "Climate and Sustainability Co-Teaching at Barnard"

Amy Starecheski, *Lecturer, Sociology*

Liza Zapol, *Lecturer, Sociology*

Sayantani DasGupta, *Senior Lecturer, Narrative Medicine, School of Professional Studies*

Lauren Taylor, *Senior Lecturer, School of Social Work*

Ovita Williams, *Lecturer, School of Social Work*

PROJECT: "The Pedagogy of Listening: An Interdisciplinary Teaching Lab"

SOLER Seed Grant

In 2020, The Science of Learning Research Initiative (SOLER) launched the Provost's SOLER Seed Grants (PSSG) program to fund and support faculty-led Science of Learning projects. PSSG awardees receive up to $5,000 in funding and in-kind support from SOLER.

SPRING 2022 AWARDEES

Tugce Bilgin, *Lecturer in the Discipline of Ecology, Evolution and Environmental Biology*

Joshua Friedman, *PhD Candidate, Cognitive Science in Education, Teachers College*

PROJECT: "How Nonverbal Communication Supports Abstract Thinking Development"

Nicholas Bock, *Lecturer in the Discipline of Earth and Environmental Sciences*

Vincent FitzPatrick, *Lecturer in the Discipline of Biological Sciences*

Debora Monego, *Lecturer in the Discipline of Chemistry*

PROJECT: "Interactive Simulations to Support Inquiry-Based Statistics in Frontiers of Science"

Samantha Garbers, *Associate Professor of Population and Family Health, Mailman School of Public Health*

Roxanne Russell, *Director of Online Education, Mailman School of Public Health*

PROJECT: "Increasing Student Engagement with Course Content and Learning Supports through Mixed-Methods Mapping of Motivation and Learning Behaviors"

Alfredo Spagna, *Lecturer in the Discipline of Psychology*

Xiaofu He, *Assistant Professor of Clinical Neurobiology, CUIMC*

PROJECT: "Neuro-DBER: A Flexible Neuroscience- and Technology-Driven Framework for Discipline-Based Education Research"

Brent Stockwell, *Professor and Chair of Biological Sciences*

PROJECT: "Evaluating Augmented Reality Using Microsoft Mesh and Hololens 2 for Teaching Deep Expertise in Introductory Biochemistry"

Amy Werman, *Lecturer in Social Work, School of Social Work*

PROJECT: "An Exploration of the Anti-Oppressive Practice of "Ungrading" and Its Effects on Student Learning"

SPRING 2023 AWARDEES

Jean Marie Alves-Bradford, *Associate Clinical Professor of Psychiatry, CUIMC*

PROJECT: "Evaluating the Effectiveness of an Upstander Training Across Modalities"

Ashli Carter, *Lecturer in the Discipline of Management, Columbia Business School*

PROJECT: "Collaborative Art & Play as Practice: Learning Inclusive Leadership Skills with AI-generated Art"

Samantha Garbers, *Associate Professor of Population and Family Health, Mailman School of Public Health*

Roxanne Russell, *Assistant Dean of Digital Learning, Mailman School of Public Health*

PROJECT: "Promoting Engagement in Quantitative Data Analysis Coursework via Tailored Educational Nudges"

Darcy Kelley, *Harold Weintraub Professor of Biological Sciences*

PROJECT: "Exploring the Use of Large Language Models to Generate Text Versions of Neuroscience Lectures"

Christopher Munsell, *Glascock Associate Professor of Professional Practice of Real Estate Development Finance, Graduate School of Architecture, Preservation and Planning*

Victoria Malaney-Brown, *Director of Academic Integrity*

PROJECT: "Assessing Graduate Student Attitudes Toward ChatGPT and Its Effectiveness as a Teaching Tool for Real Estate Finance"

Bradley Pitcher, *Lecturer in the Discipline of Earth and Environmental Sciences*

PROJECT: "Sense of Scale Embodied: Investigating the Impact of Object-Based Learning on Undergraduate STEM Education"

Alfredo Spagna, *Lecturer in the Discipline of Psychology*

Xiaofu He, *Assistant Professor of Clinical Neurobiology, CUIMC*

PROJECT: "Present! Flexible Neuroscience- and Technology-Driven Frameworks for the Study of Classroom Engagement"

Brent Stockwell, *Professor and Chair of Biological Sciences*

PROJECT: "Evaluating Augmented Reality for Embodied Learning in Introductory Biochemistry"

Support for Faculty

4,191 interactions with Columbia faculty

1,646 services provided to Columbia faculty

**1,185 faculty participants at CTL programs and events**

Faculty at the Office of the Provost Faculty Orientation.

The CTL supports the professional and pedagogical development of Columbia faculty. CTL programs and services are grounded in teaching and learning scholarship, allowing faculty to explore, experiment, and reflect on their teaching practice. Faculty are introduced to innovative pedagogies and instructional technologies for integration into their classrooms. The CTL encourages a learner-centered approach to teaching and promotes practices that cultivate inclusive and equitable learning environments. This section highlights the range of programs and services offered to Columbia faculty.

Highlights for Faculty

Teaching Transformations: Faculty Reflections and Insights on Pandemic Practices
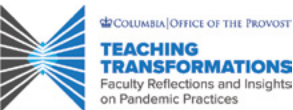
The *Teaching Transformations: Faculty Reflections and Insights on Pandemic Practices* guide, initiated by the Office of the Provost and Deans across the University, recognizes how Columbia faculty not only made teaching

and learning possible during a global pandemic, but did so in incredibly innovative ways. Beginning in August 2022, Center for Teaching and Learning staff reached out to nominated faculty, inviting them to reflect upon their experiences of teaching during the pandemic. CTL staff worked with over 50 Columbia faculty members to develop their narratives.

Throughout the guide and in their own words, faculty reflect upon their teaching transformations and the insights they gained from their pandemic teaching practices. Each faculty narrative highlights specific teaching innovations, lessons learned, and advice for other Columbia faculty who might be looking to make changes in their own courses. While teaching and learning approaches and contexts will continue to evolve, the insights in this guide provide a snapshot of what faculty have carried forward.

The guide is structured around six themes: equity and inclusion, partnerships, course [re]design, active learning, collaborative learning, and course materials and assignment [re]design. Within each of these themes, readers will find examples of teaching practices from across disciplines and schools, along with tips and resources to assist in adapting these approaches to their own teaching contexts.

Explore the guide: https://ctl.columbia.edu/transformations

Faculty Spotlight

Katja Vogt, *Professor of Philosophy*

Teaching Transformations: Faculty Reflections and Insights on Pandemic Practices

Dr. Katja Vogt teaches courses in the Philosophy department, including Introduction to Philosophy, a large lecture-based course. Like many, in the Fall of 2020, Dr. Vogt found herself teaching fully online with an opportunity to rethink the class entirely. Dr. Vogt met the moment by flipping her course, partnering with TAs and alumni to support student learning, and inviting guest lecturers to encourage student connection with course materials. Read on to learn more about what Dr. Vogt did in her course, what lessons and experiences she's carrying forward, and what advice she has for other instructors at Columbia.

Flip the Course

In the months leading up to the class I could only imagine how anxious everyone was about how it would all work out. I talked with friends in the field and worked through some of the material on our Center for Teaching and Learning website, and realized that long recordings of lectures don't work. This sounds simple and it's utterly recognizable when one thinks about one's own habits when watching videos online. For me, this consideration made all the difference. It seemed to me that all of a sudden there was the opportunity to truly flip the classroom, by providing significant input prior to class. I posted short videos, together with handouts and readings. The videos explain some of the material, but mainly focus on questions. Of course, those were special

circumstances, everyone in lockdown with much time on their hands. But the result was stunning. Students performed at a level they usually only achieve half way into the semester—in the first week!

All in all, I created 50 videos, each under 10 minutes. That's roughly two videos for each of the two lectures per week. Each video ends with a question. Students are required to come to class having thought about both questions for that day; they are asked to do so by close study of the assigned primary readings together with my handout, also posted in the "module" on CourseWorks. Each video's question also serves as a prompt for a writing assignment. Over the course of the semester, students were required to submit 10 papers (some of them very short, others a bit longer) on the questions that are explained and posed in the videos.

I'll never go back to the way I taught pre-pandemic! The level of the students' work was spectacularly good in 2020. The same goes for the Fall of 2021, when I taught the same class again in a physical classroom, but with a similar format, including the videos and required study groups. I've meanwhile produced asynchronous material also for three other classes. Ancient philosophy is quite Socratic: one needs to talk through the ideas as an active interlocutor in order to genuinely take them in. The videos help me take the time that is needed in class for informed discussion.

This semester, I'm for the first time producing videos for a graduate seminar, a class on Plato's Republic with currently an enrollment of 33 students. I use the videos in order to level the playing field. Those who haven't studied Plato in the past can work carefully through the videos, which are 10-minute lectures on key themes, and come to class with the preparation they need in order to be part of a high-level conversation.

Partner with TAs and Alumni to Support Student Learning

In addition to the videos and new assignment structure, I introduced two other elements that to my mind contributed a lot to the students' experience: the students were required to join a study group (with help from TAs, to make sure everyone was in a group that worked well in terms of time-zones), and the TAs and I spread out our office hours much more generously across the week than is otherwise customary.

I will also continue to bring back to the classroom alumni who completed their PhD here, to give them a platform to present on the research they are doing now. This is exciting for the students who are currently at CU, and so effortless with the online options.

Invite Guest Lecturers to Encourage Student Connection with Course Material

The asynchronous material supports and requires a more independent style of learning. I thought I would encourage the students to get into this mindset by introducing a research element: a guest lecture about work-in-progress by a leading scholar in the field. Zoom made this quite easy. My hope was that this helped the students see that they aren't just taking the class in order to learn some pre-existing content. A lot of arguments and ideas in the texts we are reading are contested. It involves a kind of gestalt-switch to approach the texts as a critical thinker rather than a student who takes notes in a lecture. This worked extraordinarily well and I've since integrated one online guest speaker visit with all my undergrad classes.

Advice for Instructors and the Future of Teaching at Columbia

Don't think about teaching modalities in narrow ways.

If I have any advice, it is not to think about "teaching modalities" as if this was about technology. To me, it is about the conversations—the learning, outreach, accessibility, connections with alumni, and so on— while the technology recedes into the background.

Encourage students to learn in community.

During the pandemic, a number of students told me that they took care of a grandparent or other family member and asked whether it's OK to watch the videos together. Of course it is! To me, it is inspiring that students discuss the material not just with their teachers and fellow students in study groups, but also with, say, their grandparents, who maybe never had a chance to take a class in philosophy.

Hear more about Professor Vogt's experience as part of a faculty panel in the Celebration of Teaching and Learning Symposium:
https://ctl.columbia.edu/about/2023-symposium/

Advancing Mentorship Practices

The Advancing Mentorship Practices initiative, hosted by the Office of the Provost and the Center for Teaching and Learning, is intended to provide faculty and research officers with the support they need to be effective mentors of graduate students and postdocs. In addition to the hosted events, a performance by the CRLT Players from the University of Michigan, and a keynote and workshop by Lisa Fain (see page 12 to read more), CTL staff facilitated a book give-away of *Bridging Differences for Better Mentoring: Lean Forward, Learn, Leverage* (Fain and Zachary, 2020) and led related conversations on mentoring practices during the Fall 2022 semester and monthly "Mentoring Monday Conversations" for mentors throughout the Spring 2023 semester.

In these conversations, faculty discussed their mentorship practices, brainstormed solutions to mentoring challenges, and explored what can be learned by reading excerpts from the book. Each "Mentoring Monday" conversation explored different themes including "Assumptions and Expectations," "Mentoring and Mental Health," "Addressing Challenging Moments," and "Building Trust and Giving Feedback," and aimed to form a community around mentorship of graduate students and postdocs at Columbia.

Learn more:
https://ctl.columbia.edu/advancing-mentorship/

Programs and Initiatives

The CTL offers professional development programs and events to connect Columbia faculty and instructors to effective teaching approaches, resources, and instructional technologies.

STUDENTS AS PEDAGOGICAL PARTNERS

Students as Pedagogical Partners (SAPP) is a CTL initiative that partners with students to include the undergraduate student perspective in innovative teaching and learning at Columbia. For the 2022-23 academic year, the CTL hired five undergraduate student consultants on teaching and learning. CTL staff and the SAPP student consultants partnered to develop the following online resources (read more about these resources on page 41):

- "Ungrading: Reimagining Assessment of Student Learning"
- "Learner Perspectives on AI Tools: Digital Literacy, Academic Integrity, and Student Engagement"

The student consultants also contributed to two episodes of the CTL's podcast *Dead Ideas in Teaching and Learning*:

- Season 5, Episode 7: Rigor and Assessment from the Student Point of View
- Season 6, Episode 7: The Students Have the Final (and Best!) Word on the Science of Learning

Learn more at https://ctl.columbia.edu/faculty/sapp/

159 faculty participants in CTL institutes

Institutes

Institutes provide an immersive setting for faculty to develop new teaching approaches and skills with hands-on guidance from the CTL staff over a period of several days. The CTL offered the following institute for faculty this year. To read about other Institutes, please see the Support for CUIMC Faculty section on page 43.

Students as Pedagogical Partners

Meet the student consultants below and read about their experiences in the SAPP initiative.

"My participation in SAPP was an enlightening experience as it brought to light many misconceptions and misunderstandings I had about learning. One of the most significant revelations was that the conventional method of grading is inadequate and can even be counterproductive. The emphasis on grades creates a hyper-competitive environment among students, which paradoxically hinders the learning process. I've also come to the realization that learning should not solely be results-oriented. To enhance my learning experience, I plan to reflect on my own progression throughout the course. By doing this, I can identify areas for improvement and discuss them with my instructor."

Kyle Gordon
General Studies

"I have found it enlightening to think about the learning experience at Columbia both from my own point of view as well as thinking more about how the faculty experiences the classrooms. I have learned some valuable skills that can make me a better student in the classroom. I intend to communicate as much as possible with my future teachers to understand what expectations they have of me as a student. This can remove any uncertainty from my mind that can create stress and insecurity about what kind of work I am to deliver and which goals to strive for and try to meet. Moreover, I will have opportunities to discuss any study weaknesses I may have with them and find solutions to them."

Jesper Norgaard
General Studies

Meet the student consultants below and read about their experiences in the SAPP initiative.

"Being part of this program changed how I approach my learning because it has made me be more conscious of all aspects of academic environments and course structures, as well as exposed me to the endless variety of assignment and assessment types that an instructor could employ. The program has also made me much more likely to reach out to my professors to initiate conversations about their learning goals for me as a student in the classroom so that I can better understand the intent behind assessment. In that sense, I also feel more capable of engaging in those conversations with the knowledge I gained through readings and podcasts throughout the program. Through the project, I've also grown much more appreciative of the effort instructors put into designing courses and cognisant of the challenges they face in doing so. I feel equipped to approach learning with a more flexible mind, open to the sorts of innovation we were exposed to through the program. Going forward, I will approach other learning contexts with greater curiosity and a better understanding of the roles of student and teacher in creating inclusive learning environments."

Maryam Pate
Columbia College

"What didn't I learn?! I learned about so many dead ideas implemented in not only my classrooms, but also my own learning. I learned how to be a better student and a better learner overall. I feel a lot more autonomous as a student, because I know more and am now more in control of my learning. I am much more diverse in studying [skills] now. I try to study engaging multiple senses so I have multiple memory pathways instead of just one way. I'll definitely take this with me for the rest of my life."

Emily Glover
Columbia College

"Being a part of this program has definitely altered the way I have approached my learning. I think I often felt as though college was a much more individualized learning experience than in high school or earlier. While there is a lot more flexibility in how students learn, I think this left me to feel as though I 'wasn't made' for college learning like others were. Through my participation, I was able to alter my definition of rigor and learning. This has been specifically important both this semester and last as I feel less stressed about my place in higher education. With an altered definition of rigor, I no longer place unachievable or unnecessary expectations on myself or my learning. This has allowed me to lose the 'imposter syndrome' I felt when returning to in-person classes. Conversing with other students made me understand that my experience at Columbia is not uncommon, and I can find people and spaces for support."

Olivia Schmitt
School of Engineering and Applied Science

Active Learning Institute

In this four-day immersive online experience, held in June 2023, faculty explored the purposes and benefits of active learning and learned how to apply these research-based practices by developing their own active and learner-centered course units. Through a series of hands-on activities and discussions via Zoom and CourseWorks, faculty engaged with topics such as facilitating individual and collaborative learning activities, creating effective asynchronous course materials, and fostering an inclusive course climate. Faculty left with a detailed map of their redesigned course unit, one carefully planned multimedia-based active learning experience ready to be used in their course, and connections to a network of Institute alumni committed to designing and implementing active learning across the University.

Faculty alumni of the Active Learning Institute with CTL staff John Foo, Jamie Kim, Marc Raymond, and Sam Sadeh at the Celebration of Teaching and Learning.

Faculty converse with Provost **Mary Boyce** at the Office of the Provost Faculty Orientation.

Faculty at the Office of the Provost Faculty Orientation.

OFFICE OF THE PROVOST FACULTY ORIENTATION

The Center for Teaching and Learning and Office of the Vice Provost for Faculty Advancement (OVPFA) partnered to offer the online Office of the Provost Faculty Orientation to welcome and acclimate faculty to the 2022-23 academic year in September 2022. This virtual orientation program aims to complement each school's orientation activities by introducing a range of University resources and offices devoted to supporting faculty's teaching and scholarship.

The orientation comprises a series of online self-paced CourseWorks modules and acquaints faculty with the CTL, the OVPFA, the Office of Faculty Affairs, the Office of Work/Life, the Office of Multicultural Affairs, the Office of Equal Opportunity and Affirmative Action, Columbia University Information Technology, the Office of Research Initiatives, and the University Libraries.

The CTL also co-hosted an in-person reception at Faculty House with the OVPFA to welcome faculty who joined Columbia in 2022. Provost Mary Boyce welcomed faculty, and Dennis Mitchell, Executive Vice President for University Life and Senior Vice Provost for Faculty Advancement, along with Catherine Ross, CTL Executive Director, shared information about the OVPFA and CTL, respectively.

WORKSHOPS AND EVENTS

Workshops and Events allow faculty to explore timely topics related to teaching, learning, and instructional technologies for 1-2 hours with the CTL. The CTL hosts many of the workshops during the weeks leading up to the beginning of the Fall and Spring semesters in order to help faculty prepare for the coming semester. Workshops were held in in-person, online, and hybrid formats during the 2022-23 academic year. The CTL offered the following workshops and events.

567 faculty participants in CTL workshops and events

Workshops on Inclusive and Anti-Racist Pedagogy

Addressing Challenges to Equitable Assessment
This session helped participants identify several common challenges to equitable assessment, as well as possible strategies to address these challenges as they arise. It is essential for instructors to be able to both identify and address these challenges as they occur so that all students can have an equitable learning experience. (Fall 2022)

Anti-Racist Pedagogy in Action: First Steps
Participants were introduced to anti-racist pedagogy as a framework for teaching and learning, connected this framework to their own teaching contexts, participated in a communal reflective practice around anti-racist pedagogies, and collaborated in small groups with their colleagues. (Fall 2022)

It's In the Syllabus! *Or is it?*:
Designing a Transparent Syllabus
This session used the CTL's online resource "Designing an Inclusive Syllabus" to facilitate an interactive workshop reviewing each other's syllabus from the student perspective. Participants gained skills to identify overarching considerations of transparent and inclusive syllabus design, identify the elements of a syllabus and inclusive moves within each element, and enact small changes to their own syllabus to revise for inclusivity and transparency. (Fall 2022 and Spring 2023)

Navigating HOT Moments:
Before, During and After Class
Faculty learned strategies for engaging with, facilitating, and navigating HOT—heated, offensive, or tense—moments before, during, and after class. (Fall 2022 and Spring 2023)

Teaching Inclusively From the Start
In this session, faculty reflected on their teaching practices and considered five principles of inclusive teaching. Faculty collaborated with colleagues, shared ideas, and left with strategies to implement in their courses. (Fall 2022 and Spring 2023)

Workshops on Teaching with Instructional Technologies

Engaging Students with Annotation Tools
Participants experienced a short demonstration of Perusall, a free tool developed at Harvard to promote social reading and collaborative annotation. The demo ended with a quick overview of other similar tools for annotation and was followed by opportunities to ask questions and to reflect on how participants might intentionally integrate Perusall and other tools for collaboration into their teaching context. (Spring 2023)

Engaging Students with Ed Discussion
Participants experienced a short demonstration of Ed Discussion, an online discussion platform that is integrated into CourseWorks and can be used for asynchronous discussions or synchronously such as a backchannel for live in-person classes. Participants were given opportunities to ask questions and to reflect on how they might intentionally integrate Ed Discussion into their teaching context. (Fall 2022 and Spring 2023)

Engaging Your Students with Poll Everywhere
Participants in this online workshop experienced a short demonstration of Poll Everywhere, an in-class polling and quizzing tool that allows instructors to pose various types of questions to better understand what students are learning and collect their feedback. Participants were then given opportunities to ask questions and to reflect on how they might intentionally integrate Poll Everywhere into their teaching context. (Fall 2022 and Spring 2023)

Intro to Gradescope:
Grading and Feedback for Science and Engineering
Gradescope is an assessment platform integrated with CourseWorks that allows graders to build rubrics for faster and more equitable grading, respond to handwritten student work in an online environment, and provide feedback to students efficiently. This session for science and engineering faculty provided a demonstration of how to grade a handwritten assignment, provide feedback to students, and link CourseWorks courses and assignments with Gradescope. (Fall 2022 and Spring 2023)

Setting Up Assignments, Quizzes, and Discussions in CourseWorks
Participants learned best practices to create assignments, quizzes, and discussions in CourseWorks, Columbia's learning management system. Faculty experienced a walk through of these commonly used tools and saw how CourseWorks displays graded work. Participants also gained an understanding of available options and features such as giving assignments different weights, and adding extra time to quizzes. (Fall 2022 and Spring 2023)

Teaching with CourseWorks
Faculty learned how to create community, support student engagement, and assess student learning using CourseWorks, Columbia's learning management system. This workshop provided an overview of the CourseWorks interface and highlighted a toolset to set up a course with clear expectations for students, create opportunities for a variety of assignment engagements, and nurture an environment that encourages a culture of inclusive communication. (Fall 2022 and Spring 2023)

Workshops on Teaching in Context and Engaging Students in Their Learning

Designing STEM Poll Questions that Go Beyond Recall
In this workshop, Science and Engineering faculty learned the first steps to developing poll questions that encourage students to move beyond recalling information and engage in higher order cognitive processes, such as applying concepts or evaluating hypotheses. This workshop combines the cognitive framework Bloom's Taxonomy and the audience response system Poll Everywhere, which faculty and students in Science and Engineering at Columbia can access. (Fall 2022 and Spring 2023)

Engaging Students in Discussion
Participants explored a four-step planning process as well as strategies to ensure that students engage in and learn from discussions and leave with clear takeaways. (Fall 2022 and Spring 2023)

Four Ways to Manage Your Large Course
In this session, faculty discussed ways to promote classroom community, active learning, and academic integrity to make large courses more manageable and rewarding for faculty and students alike. Participants reflected on strategies that are scalable for varying sizes of large courses. (Summer 2022)

Getting Started with Active Learning
In this session, faculty reflected on ways to move learners from passively receiving information to actively thinking about what they are learning, applying course content, and engaging with their peers. Participants experienced active learning strategies, including the Encounter-Engage-Reflect framework for building holistic active learning experiences into their course. (Spring 2023)

Making Feedback Matter: Strategies that Serve You and Your Students
This session explored the connection between feedback and student learning, and provided faculty with strategies on giving feedback that is actionable, timely, and efficient. Through reflection on current feedback practices and whole group discussion, participants considered their individual feedback approaches that incorporate evidence-based strategies and are transparent, time-saving, and effective in their teaching practice. (Fall 2022 and Spring 2023)

Planning Your Lectures Based on the Science of Learning
Participants discussed how to plan lectures to promote student learning and engagement. They further discussed findings from the science of learning—activating prior knowledge, practicing retrieval, and reflecting—and simple ways they could incorporate them so students can further engage with course material. (Fall 2022 and Spring 2023)

Three Ways to Manage Your Large Course
Workshop participants reflected on strategies that are scalable for varying sizes of large courses, including: promoting classroom community, engaging in active learning practices, and discussing academic integrity to make large courses more manageable and rewarding for faculty and students alike. (Spring 2023)

Workshops in Collaboration with Columbia Partners

Establishing Shared Values of Academic Integrity with Undergraduate Students
This discussion centered key best practices on academic integrity when teaching undergraduate students. Participants explored the Six Fundamental Values of Academic Integrity and considered how they can use them to cultivate a shared sense of responsibility for upholding academic integrity in their course. Faculty participants also drafted an Academic Integrity narrative unique to their course that they can share with students to spark this conversation in their courses. This session was

"When I reflect on what has been most helpful—to my adjunct colleagues and to me—about these CTL sessions, three things stand out in particular. First and foremost is the sensitive, non-judgmental way Dr. Irvin [CTL Senior Director], Dr. Petitti, and Dr. Kim [CTL Assistant Directors] have created an awareness of issues that might otherwise be invisible to us in our teaching and that are, admittedly, quite daunting to many of us. They start by acknowledging that none of this is easy and that even with the best of intentions as teachers, we will sometimes get it wrong. We will make mistakes. But they have repeatedly stressed that we cannot teach from a position of fear; we must embrace the complexity of the task and not shy away from teaching in an open and inclusive manner. And when we make mistakes, we need to own them, talk honestly about them with our students, and learn from them. My colleagues and I have found these insights to be both powerful and liberating. Second, our CTL colleagues have been generous in spending the time necessary to gain an understanding of the Law School's culture and needs, and to design versions of their workshops geared to this specific audience. That is a big part of the reason that our adjunct faculty have responded so enthusiastically. Finally, our CTL colleagues don't simply tell us how to do these things; they provide an immersive experience, where the participants actively engage with each other on the issues. This, in turn, helps build a sense of trust and community among people who, because of their part-time status, seldom get to see each other, let alone talk openly and honestly about their teaching. And that has lasting benefits to our adjunct faculty that go beyond the value of any individual session. In short, I am truly grateful to my CTL colleagues."

—**Philip Genty**, *Clinical Professor of Law, Everett B. Birch Innovative Teaching Clinical Professor in Professional Responsibility in the Faculty of Law, Vice Dean for Experiential Education* (In reference to the requested Workshop To Go "Ways to Be More Inclusive in Your Course" and customized session "Feedback and Assessment for Learning")

hosted in collaboration with Victoria Malaney-Brown, Director of Academic Integrity for Columbia College and Columbia Engineering. (Fall 2022)

Learning Lunch: Academic Integrity Case Studies—Why Context Matters
This discussion, hosted in collaboration with Victoria Malaney-Brown, Director of Academic Integrity, centered on best practices in academic integrity when teaching undergraduate students. Participants explored James Lang's theory of cheating, which highlights five contextual factors prevalent in classrooms that may induce academically dishonest behaviors. Faculty participants then collaboratively considered these factors in two common scenarios of academic dishonesty based on real cases. Additionally, participants learned about the reporting process from the Director of Academic Integrity. (Spring 2023)

Teaching in the Morningside eClassroom
Faculty learned about and experienced a hybrid classroom environment on Morningside campus, equipped by Columbia University Information Technology (CUIT) to enhance face-to-face instruction as well as support remote students. CTL provided an overview of hybrid (HyFlex) classroom technology, shared pedagogical resources, and answered questions from faculty. These sessions were offered in collaboration with CUIT colleagues. (Fall 2022)

WORKSHOPS TO GO

The Workshops To Go program is an on-demand offering for departments or programs interested in hosting a pedagogical workshop for their faculty. All workshops present evidence-based practices and are grounded in the science of teaching and learning.

With each Workshop To Go offering, faculty engage in discussion and work through tailored resources, strategies, and practices that can help them address common challenges in their classrooms. Department chairs and program directors select from a list of session topics offered in 30, 60, 75, or 90-minute formats depending on the topic. In 2022-23, Workshops To Go were offered in in-person, hybrid, and online formats. Below is a list of Workshop To Go sessions and the departments, schools, and/or offices that requested them:

- **Applying Inclusive Teaching Principles to Clinical Education:** CTL staff led this workshop for faculty in the Department of Physical Therapy.

- **Effective Feedback in Clinical Settings:**
  CTL staff led this workshop for faculty at the School of Dental Medicine, School of Nursing, and in the Department of Neonatology (NICU).
- **Engaging Students in Discussion:** CTL staff led this workshop for faculty at Teachers College and the School of Nursing.
- **Navigating HOT Moments:** Before, During, and After Class: CTL staff led this workshop for faculty at the Columbia Business School, the Journalism School, and in the Department of Physical Therapy.
- **Ways to Be More Inclusive in Your Course:**
  CTL staff led this workshop for faculty at the Columbia Business School, the Institute of Human Nutrition, the Law School, Teachers College, and the Department of Biological Sciences.

Learn more: https://ctl.columbia.edu/faculty/offerings/workshops-to-go/

CUSTOMIZED WORKSHOPS

In addition to Workshops To Go, department chairs and administrators requested customized workshops and information sessions to address the specific teaching needs of instructors in their schools, departments, and other academic units. During these workshops, participants worked through discipline-specific challenges and/or case studies and brainstormed strategies to implement in their own classrooms. Workshops were offered in in-person, hybrid, and online formats.

Schools & Offices

Barnard Department of Biology

- Designing Discussion for Breadth and/or Depth (September 9, 2022): Barnard Biology faculty reflected on their experience leading discussions online last year, and challenges they anticipate returning to discussions in person. Faculty used CTL's 4-step Learning Through Discussion framework to reflect on, revise, and then roleplay portions of two different discussion lesson plans.

Columbia Undergraduate Scholars Program

- CourseWorks Training (September 8, 2022)

Law School

- CourseWorks Training (September 24, 2022)
- Feedback and Assessment for Learning (April 17, 2023): In this session, Law School faculty explored strategies to help foster a culture of feedback and assessment

"I requested a CTL teaching observation because I wanted a professional to help identify aspects of my teaching that were going well, and aspects that could be improved. John Foo [CTL Assistant Director] provided two valuable teaching inputs: 1) He shared resources to add to my toolbox; this was general input. 2) He gave specific feedback. One thing that really stuck with me is that he counted the number of interactions I had with students. So now when I'm planning a class I try to think about how many opportunities students have to participate in my class. I think it helps create a more active learning experience."

— **Abigail (Abba) Greenleaf**, *Assistant Professor of Population and Family Health (in ICAP)*

in their course. They considered questions around feedback and assessments, such as: How do I create a culture of feedback and assessment? What are different types of assessment feedback? How can I collect, interpret, and implement feedback from students? What is the relationship between my assessment design and the feedback I provide for students?

School of International and Public Affairs

- CourseWorks for SIPA: TA and Reader Orientation (September 1, 2022)

School of Social Work

- CourseWorks Training (September , 2022)

Services

The CTL offers a range of services that guide Columbia faculty to support them as they reflect on their teaching and implement effective practices.

CONSULTATIONS

Faculty requested 1,981 one-on-one consultations with CTL staff to receive support for their teaching and learning needs throughout the year. These consultations were offered in person, over Zoom, and over the phone, either scheduled or during CTL virtual office hours for faculty seeking immediate support. Common consultation topics included course and curriculum design, inclusive teaching strategies, Provost's teaching and learning grants, and assessment and evaluation.

TEACHING OBSERVATIONS

Through a structured process, CTL consultants observed instructors in their classrooms and provided individualized feedback to improve their teaching. In the academic year 2022-23, 7 teaching observations were conducted for faculty across four different schools at Columbia. CTL staff also worked with schools, programs, and departments seeking to refine their peer teaching observation practice.

LEARNING DESIGNER TECHNOLOGY SUPPORT

CTL Learning Designers help members of the Columbia teaching community effectively integrate instructional technologies into their teaching practice. Faculty and instructors can seek advice and support to experiment with a rich portfolio of online platforms and digital and media tools to turn classrooms and online environments into active spaces for learning. The CTL also supports custom software development and media production driven by the faculty's teaching and assessment goals. These efforts allow faculty to stay on the cutting edge of instructional technologies.

This year, the CTL supported a range of platforms and provided space, equipment, and education for the production of media and learning objects. *To learn more:* https://ctl.columbia.edu/resources-and-technology/teaching-with-technology/

CourseWorks Support

Columbia's learning management system, CourseWorks, is at the center of many instructional technology activities. CourseWorks is supplemented and enhanced by other tools that support a range of instructional objectives, such as tools for online collaboration, presentations, lecture capture, audience response, media annotation, and electronic portfolios.

Do-It-Yourself (DIY) Media Production Spaces

The CTL maintains two DIY Media Production Spaces on the Morningside and Medical campuses, equipped with recording technology, cameras, lights, backdrops, and microphones suited for producing instructional multimedia content including interactive videos, screencasts, and annotated media. Instructors who request to use the facilities receive a consultation with a CTL Learning Designer in order to learn how to use the equipment and software, discuss their learning goals for the course, and consider how student learning can be enhanced using instructional media.

EdBlogs

EdBlogs make it easy to share course content and create an online community using a blogging format. EdBlogs provides a blog for any course offered at Columbia University upon the course instructor's request.

Ed Discussion

Ed Discussion is a Columbia-supported communication, discussion, and Q&A platform that is integrated with CourseWorks (Canvas). Ed Discussion combines Question, Post, and Instructor Announcement threads into a single interface, and offers tools to help instructors and students keep class discussions and communication organized and easy to access, even for large courses.

Gradescope

Gradescope is a tool designed to streamline and standardize the grading of paper-based, digital, and coding assignments. Gradescope allows for handwritten assignments to be graded digitally, and for multiple graders to collaboratively develop and implement their grading rubrics. It supports problem sets and projects as well as worksheets, quizzes, exams, and papers.

Locus Tempus

Locus Tempus, an open-source digital mapping tool, is designed to facilitate map-based learning activities across disciplines by engaging students as repository builders, researchers and curators. The application integrates with CourseWorks, allowing faculty to easily set up assignments from their courses.

Mediathread

Mediathread, an innovative platform developed at the CTL, supports discussions, compositions, and other assignments that are centered on multimedia source materials. Working in Mediathread, students are able to closely analyze videos, audio files, images, and PDFs, and share annotations and insights within a course-specific website.

Poll Everywhere

Learning Designers aided faculty with the use of Poll Everywhere, the Audience Response System (ARS) used at Columbia. Instructors used Poll Everywhere to engage with learners, collect answers to questions, and provide real-time feedback. In Poll Everywhere, learners respond to questions using their own web-enabled devices, such as a phone, tablet, or laptop.

Panopto

Panopto is Columbia's media platform featuring full storage and streaming functionality for audio and video content. Panopto supports recording and live streaming of classes and other events and can be integrated with CourseWorks and other services through Learning Tools Interoperability (LTI) integration. Panopto is particularly useful for flipped classroom, lecture capture/review, and online programs.

Quizzing with Confidence

Quizzing with Confidence provides an alternative to traditional multiple choice questions by allowing students to indicate their confidence in one of three choices. The application fully integrates with CourseWorks to provide a seamless experience for students and for faculty reviewing submissions.

Resources and Online Courses

The CTL develops online resources and courses for instructors covering a range of teaching and learning topics. These resources and courses provide a concise introduction to pedagogical approaches, the basics of effective implementation, and practical strategies to help instructors address the teaching and learning issues that they face in their classrooms.

Resources Updated or Created This Year

Considerations for AI Tools in the Classroom

This resource offers instructors a brief introduction to Artificial Intelligence (AI) Tools, specifically ChatGPT, along with several strategies they might consider for navigating or engaging with these tools in their courses.

Designing for Inquiry-Based Learning in Undergraduate Science and Engineering Lab Course

While undergraduate laboratory courses are often used to reinforce concepts and teach students non-inquiry lab skills, such as gaining familiarity with lab equipment, science and engineering labs can be intentionally designed to help students develop their scientific inquiry skills. This resource highlights inquiry-based lab designs from featured Columbia and Barnard faculty, and provides considerations for designing opportunities for student inquiry in undergraduate science and engineering lab courses.

Effective Feedback in Clinical Education

Detailed and prompt feedback on clinical performance, and opportunities to improve, are necessary to guide a trainees' actions in the clinical setting as they work towards achieving required competencies. Taking a systematic approach to feedback requires instructors to consider several important questions, such as: What role does feedback play in the culture of the clinical experience? How do I construct feedback that is impactful? What actions am I taking that help or hinder the feedback process with my trainees? To help instructors answer these questions, this resource presents some research-based strategies on feedback in clinical settings.

Getting Started with Creative Assignments

Creative teaching and learning can be cultivated in any course context to increase student engagement and motivation, and promote thinking skills that are critical to problem-solving and innovation. This resource features examples of Columbia faculty who teach creatively and have reimagined their course assessments to allow students to demonstrate their learning in creative ways. Drawing on these examples, this resource provides suggestions for creating a classroom environment that supports student engagement in creative activities and assignments.

Learner Perspectives on AI Tools: Digital Literacy, Academic Integrity, and Student Engagement

In Spring 2023, with the rising attention surrounding the use of ChatGPT and other artificial intelligence (AI) tools in higher education, we asked our undergraduate student consultants from the CTL's Students as Pedagogical Partners initiative for their perspectives. In this resource, they share their thoughts on AI tools in relation to digital literacy skills, instructor-student dialogue on academic integrity, pedagogical use of AI tools, and assignment design.

Leveraging Annotation Activities and Tools to Promote Collaborative Learning

Collaborative annotation activities support learning by encouraging students to learn with and from their peers. Research has shown that a collaborative learning environment can help strengthen student confidence, as well as foster their critical thinking skills and active engagement in learning. This resource offers an overview of some of the benefits of collaborative annotation, as well as specific tools and sample activities to help facilitate this collaboration.

Ungrading: Reimagining Assessment of Student Learning

Ungrading considers grades as a systemic practice and offers alternative ways to reimagine how student learning can be assessed more equitably. In Fall 2022, we asked undergraduate students (consultants on the Students as Pedagogical Partners initiative) to reflect on their experiences with assessment in Columbia classrooms and the learning benefits of ungrading. In this resource, students share their perspectives on how ungrading can serve as a valuable assessment strategy to support student learning. Themes that emerged include autonomy, agency, and transparency.

379,936 total pageviews on CTL website.

Teaching Guide

Guide for Inclusive Teaching at Columbia

In 2017, the CTL authored and released the *Guide for Inclusive Teaching at Columbia*, which has received widespread interest. The online version of the guide has been accessed over 58,858 times in 137 countries since its release. The guide offers five research-based inclusive teaching principles, as well as practical, accessible, and usable evidence-based strategies that instructors can use immediately.

Online Courses

Assessment and Grading in CourseWorks 2.0

This course provides instructors with an in-depth understanding of the assessment and grading features in CourseWorks. Participants learn about setting up assignments within CourseWorks using a range of tools. The course also helps participants navigate CourseWorks' grading features to assess assignments, quizzes, and discussions. Since its original launch in late Spring 2018, the courses have recorded 529 enrollments by faculty and instructors.

Blended Learning Essentials

This self-paced course provides an overview of blended learning and guides instructors through the design process for a lesson or unit of study. The course features videos of Columbia faculty and former recipients of the Provost's Innovative Course Design grants, who share their blended teaching and learning experiences.

Course Design Essentials

This online, self-paced course guides faculty through the fundamentals of learner-centered course design and a series of activities and downloadable worksheets. Upon completing the asynchronous experience, participants have a plan and the resources needed to continue the design process.

Inclusive Teaching: Supporting All Students in the College Classroom MOOC

In June 2019, the Columbia CTL launched the first ever MOOC (massive open online course) dedicated entirely to the topic of inclusive teaching in higher education. The course provides practical, accessible, and usable strategies that instructors can implement in their classrooms to create and maintain a supportive learning environment for all students. This course aims to provide instructors with tools that are immediately applicable to their teaching contexts. Since its launch, over 17,806 people have enrolled in the course.

Introduction to CourseWorks Online 2.0

Introduction to CourseWorks Online provides instructors with an overview of the features and functionality of CourseWorks, Columbia's learning management system, allowing them to build and support engaging courses. In this self-paced course, participants learn how to navigate CourseWorks, manage syllabi and course materials, and utilize communication features. The course provides tips and examples that highlight the use of CourseWorks tools as applicable to various teaching and learning contexts. Since its initial launch in Fall 2017, the course has recorded 1,275 enrollments by faculty and instructors.

Guide for Inclusive Teaching at Columbia

COLUMBIA | CTL
Center for Teaching and Learning
Office of the Provost
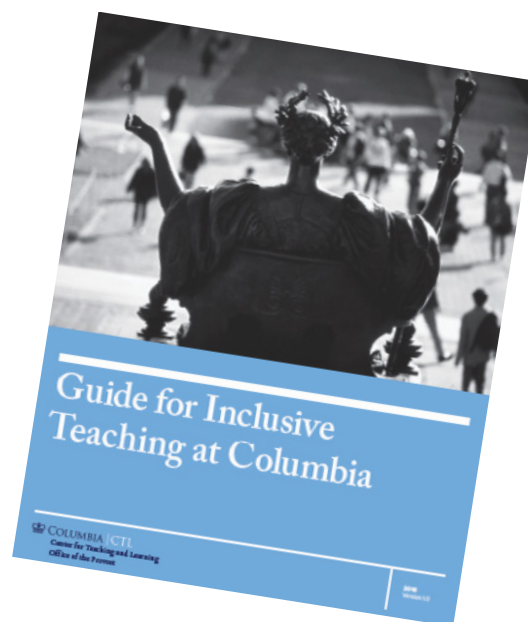
Support for Faculty at Columbia University Irving Medical Center

1,491 interactions with CUIMC faculty

743 services provided to CUIMC faculty

501 faculty participants at CTL programs and events

In addition to the range of faculty development programs and services provided to faculty at CUIMC and across Columbia's various campuses, the CTL also offered a suite of programs and services exclusively for CUIMC instructors. These offerings provided instructors with effective teaching approaches, resources, and instructional technologies. The CTL facilitated institutes,


customized workshops, and extensive Provost grant support to address the specific teaching needs of schools, departments, and other academic units at CUIMC.

Institutes for CUIMC Faculty

Summer Institute for Teaching and Learning for CUIMC Faculty

The CUIMC Summer Institute for Teaching and Learning (SITL) is a cornerstone event at CUIMC, devoted to exploring effective teaching and learning strategies in health sciences education. The institute is designed for faculty new to teaching or those taking on new education roles, to develop their skills as educators, learn about interactive teaching techniques, and collaborate with other faculty across the campus. Topics covered included: effective course design for face-to-face or online classrooms, designing student-centered activities, and creating inclusive learning environments. SITL celebrated its 16th iteration in July 2023. Over the past 16 years, the institute has averaged 25 participants, 5 table facilitators, and 5 presenters. Having moved online for the past three years due to the pandemic, the institute transitioned back to an in-person event this year.

The Summer Institute is a partnership across the CUIMC teaching community and is sponsored by the CTL, the CUIMC Office of Faculty Professional Development, Diversity & Inclusion, the Vagelos College of Physicians and Surgeons (VP&S) Center for Education Research and Evaluation, the VP&S Apgar Academy of Medical Educators, the VP&S Office of Education, the School of Nursing Office of Education, the College of Dental Medicine Office of Education, and the Mailman School of Public Health Office of Education.
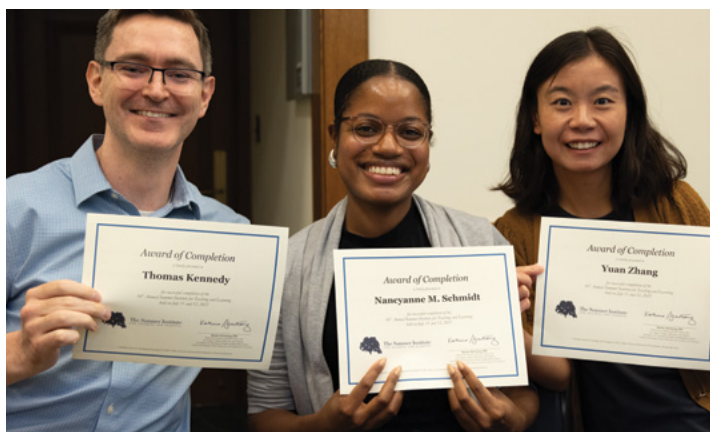
Faculty participants in the CUIMC Summer Institute for Teaching and Learning.

> "As a new faculty member who inherited multiple established courses, I found the lectures and course materials about Backward Design to be incredibly valuable. The Summer Institute offered meaningful instruction, feedback, and homework that made me feel prepared to take on the redesign of course objectives, assessments, and learning experiences. I am proud to say that I fully implemented this framework across all my didactic and lab-based courses during the past academic year and received very positive feedback from students."
>
> — **Danielle Struble-Fitzsimmons**, *Assistant Director of Clinical Education, Assistant Professor of Rehabilitation and Regenerative Medicine (Physical Therapy)*

CUIMC Anti-Racist Educator Institute

The CUIMC Anti-Racist Educator Institute (AREI) ran in July 2022. The institute was designed for CUIMC faculty interested in implementing curricular and pedagogical reforms in diversity, equity, and inclusion (DEI), within their schools and departments, as well as in collaboration across CUIMC. The institute augmented existing initiatives across CUIMC. AREI themes focused on confronting bias, systemic racism in academic and healthcare settings, and course design and facilitation strategies to create anti-racist change in learning environments.

The AREI was hosted in collaboration with the CUIMC Office of Faculty Professional Development, Diversity & Inclusion, the Mailman School of Public Health Teaching Academy, and the Office of Innovation in Health Professions Education at the Vagelos College of Physicians and Surgeons.

Support for Provost's Teaching and Learning Grant Projects for CUIMC Faculty

Unveiling the Hidden Curriculum: An Innovative Approach to Teaching Professionalism in the Operating Room during the Medical Student Surgery Clerkship with Dr. Katie McManus

Dr. Katie McManus, Assistant Professor of Surgery at CUIMC, and General Surgery Department Surgical Education Fellow Dr. Sophie Mayeux collaborated with the CTL on their Innovative Course Module Design project "Unveiling the Hidden Curriculum: An Innovative Approach to Teaching Professionalism in the Operating

Room during the Medical Student Surgery Clerkship." The major clinical year (MCY) for medical students marks an important transition from mostly classroom-based learning to in-person hospital-based learning. However, many of the professional and interpersonal skills required for a student to be successful in the hospital setting are not rigorously defined. Too often there is a reliance on a "hidden curriculum" in which the attendings and residents model professionalism rather than teaching these skills in a more direct way. This is particularly obvious on the surgery clerkship as students—many for the first time—have to navigate a new and unfamiliar environment inside an operating room. Drs. McManus and Mayeux systematically explored expert surgeons' expectations for medical students in the operating room and collated the consensus into a set of learning objectives for students. They then developed an objective assessment tool using those learning objectives to promote the exchange of feedback between the student and the faculty or resident.

Drs. McManus and Mayeux also developed an introductory session on intergroup dynamics delivered during the surgery clerkship orientation, which included the impact of implicit bias in healthcare. Given that the operating room is an unfamiliar and intimidating environment that can be largely related to the interpersonal interactions and power dynamics, this new session aims to give students a lens for processing these complex interactions, and help them refocus on their own learning. The session utilizes case-based scenarios to familiarize students with the unique environment inside the operating room, helping demonstrate the role of all members of the operating room team while also showing where and how they fit in. Together, the revised learning objectives and the session on intergroup dynamics are helping learners understand their role in the operating room, process the interactions they encounter, and focus their attention on the patient and their learning.

Building Competency in Technology-Based Interventions for Assistive Technology and Modifications in Occupational Therapy with Rochelle Mendonca

Rochelle Mendonca, Assistant Professor of Rehabilitation and Regenerative Medicine at CUIMC, received an Innovative Course Design Grant to create a new course in the Fall 2022 semester titled "Assistive Technology and Modifications" for the Occupational Therapy program. In this course students first gain foundational knowledge of assistive and adaptive technologies and later integrate

this knowledge in a culminating group project, designing and delivering an adaptive low-tech device for an assigned child with disabilities in the community. This newly required course strategically takes place in the final semester of students' didactic training and provides them with a unique opportunity to integrate knowledge from their previous coursework, including diagnosis, impairments, assessment, training, intervention, and the influence of the environment and social determinants on health outcomes.

The key instructional strategies incorporated that contributed to student success include project-based learning, strategic feedback design, and interactive experiences with technology experts. Dr. Mendonca collaborated with the CTL to extensively design the final project assignment which includes a final rubric, peer evaluation form, personal reflection, and strategic scaffolding for project completion. Students develop a group contract, have several instructor check-ins, give mid-semester feedback on project development, and have weekly assistive device knowledge checks. This new innovative course provides a blueprint for successful project based learning in healthcare contexts through a balance of hands-on learning and guided, effective feedback.

Developing Mindfulness Movement Tutorials to Expand Self Compassion and Mindfulness Practice for Health Practitioner Students with Martha Sliwinski

Dr. Martha Sliwinski, Associate Professor of Rehabilitation and Regenerative Medicine at CUIMC, expanded the Self-Compassion and Mindfulness for the Helping Professions online elective course, in which students explore self-compassion techniques and consider applications for their personal and professional practice. Through an Innovative Course Design Grant and extensive collaboration with the CTL media team, Dr. Sliwinski produced four mindfulness movement tutorial video series with experts in Hatha Yoga, Yoga Nidra, Tai Chi and Feldenkrais. In each video series, an expert introduces students to the movement practice, guides them through a demonstration, and gives examples of use in clinical practice. This project bolsters medical campus initiatives for wellness and holistic care to promote retention and prevent burnout among health care professionals. The video and instructional activities can be easily reused and adapted for health professional students, faculty, and practitioners across the medical campus.

The project was a collaboration with the CUIMC Student Health on Haven. Assistant Director Jennifer Nguyen was instrumental in developing experiential learning methods and ensuring positive student experience. Redesigned course activities include weekly reflections, a collaborative digital media artifact wall, student experience surveys, and a final 12-month integration plan. In addition, Arielsela Holdbrook-Smith, Dr. Danielle Struble Fitzsimmons and Dr. Suzanne Semanson served as co-instructors after receiving training in mindfulness-based stress reduction and facilitation skills. This team of educators worked together to successfully implement the course and develop a more comprehensive framework for learning self-compassion and mindfulness as health care professionals.

Developing a System for Equitable Evaluation of Teaching in Emergency Medicine

In 2022, the Accreditation Council for Graduate Medical Education published its Clinician Educator Milestones, which provide a series of competencies that define the career progress of faculty in academic medicine. However, the milestones provide guidelines on what to evaluate but not how to evaluate it. Current methods of teaching evaluation rely heavily on learner evaluations, which have been documented to be highly biased. This year, Dr. Kiran Pandit, former Director of Educational Program Development in the Department of Emergency Medicine, and Dr. Tiffany Murano, Vice Chair of Education in the Department of Emergency Medicine, worked with the CTL and Center for Education Research and Evaluation (CERE) to develop and apply an equitable framework for evaluating teaching in the department of Emergency Medicine that is in line with the Clinician Educator Milestones. This framework diversifies the information used to evaluate teaching to include peer and self evaluations, in addition to learner feedback, for faculty to use as part of their teaching portfolio. This system represents a more holistic approach to teaching evaluation.

As part of this project, CTL staff and Anabelle Andon, Medical Education and Learning Specialist at the CERE, worked with Dr. Pandit and Dr. Murano to develop instruments for self and peer evaluations that can be utilized by faculty to build their teaching portfolios with minimal additional effort. Dr. Pandit and CTL staff hosted two workshops in the spring semester to train faculty in the department on the use of these tools. Dr. Murano will pilot the use of these tools to collect data for further evaluation, as part of the overall goal of revising the teaching evaluation system in the department.

Enhancing Support for Clinical Educators: New Workshops for CUIMC Faculty

As part of an effort to build additional support for the CUIMC teaching community, the CTL launched the Clinical Teaching Series. This set of workshops and on-demand resources are designed to specifically target teaching that occurs within clinical environments, the setting for much of the teaching on the CUIMC campus. The series launched in Spring 2023 with two workshops and has received significant interest from the CUIMC community. Workshops included:

Effective Feedback in Clinical Settings

The clinic is a busy setting with a focus on caring for patients, often leaving little time for instructors to discuss a learner's performance. This workshop focuses on empowering faculty to provide meaningful feedback to learners in the clinical setting, and provides instructors with the tools to enhance their feedback skills. This workshop was launched in January 2023 and was requested four times in its first semester. The workshop is accompanied by an on-demand teaching resource, "Effective Feedback in Clinical Education."

Applying Inclusive Teaching Principles to Clinical Education

This workshop addresses the challenges to inclusive teaching that exist in the clinical environment. The workshop adapts the CTL's "Guide to Inclusive Teaching at Columbia" to the clinical setting and outlines how instructors can apply the five principles of inclusive teaching outlined in the guide to create an equitable learning environment in the clinic. The workshop was launched in March of 2023.

Customized Workshops

The CTL facilitated the following customized workshops for CUIMC faculty:

School of Nursing

- CourseWorks Training for New Instructors (August 24): In this workshop, faculty new to the School of Nursing were introduced to the essentials of using CourseWorks (Canvas). The workshop included an overview of the global navigation and demonstrated how to customize course navigation, organize course content, and create modules to lower the cognitive load for students. Lastly, the workshop covered community-building and communication within CourseWorks, utilizing tools such as discussion forums, user profiles, and providing timely, meaningful feedback on assignments.

- Intermediate Tools for Assessment and Feedback with CourseWorks (January 12): CTL staff delivered a custom workshop in which participants reviewed intermediate features in the quiz tool and assignment grouping functions in CourseWorks. Participants also reflected on how to use learning analytics, strategies for monitoring progress, and giving equitable feedback.

Vagelos College of Physicians and Surgeons, MD Program

- Promoting an Inclusive Learning Environment (September 29): In collaboration with Dr. Hetty Cunningham, the CTL facilitated this workshop for faculty from VP&S's Foundations of Clinical Medicine (FCM) Tutorials course. The session focused on adapting the Columbia *Guide for Inclusive Teaching* to the clinical setting through a combination of presentation, case studies, and active discussion.

- Introduction to Curriculum Design Frameworks (October 25): As part of the "Reimagining the VP&S Curriculum Retreat," the CTL provided a brief overview of approaches for curriculum design. The purpose was to orient participants to the frameworks being employed, where they are in the process, and to prepare participants for the activities to follow, specifically thinking about the outcomes desired of learners completing the VP&S MD program.

Vagelos College of Physicians and Surgeons, Pediatric Hospitalists

- Introduction to the CTL and Learning Objectives (March 28): In this custom workshop, faculty were introduced to the CTL and its services. As part of this introduction, CTL staff provided an introduction on how to develop learning objectives specific to the pediatric clinical setting. This included a facilitated conversation eliciting the goals and expectations of trainees in the pediatric clerkship, and how to refine the goals into specific, measurable learning objectives.

Support for Graduate Students

4,964 interactions with Columbia graduate students

1,330 services provided to Columbia graduate students

2,132 graduate student participants in CTL programs and events

Graduate Students participate in the Teaching Development Program Sprint.

The CTL supports the pedagogical and professional development of Columbia graduate students across the University who have current or future teaching responsibilities. This support includes an array of offerings for graduate students to help them reflect on, measure, and improve their teaching while at Columbia. Graduate students participating in the CTL's programs and services develop a sense of pedagogical agency and discover the value of interdisciplinary exchange and peer-driven inquiry, helping to prepare them for the future in a variety of academic and professional settings.

To learn more about offerings for graduate students:
https://ctl.columbia.edu/graduate-instructors/

Highlights for Graduate Students

Pre-Professional Support

The CTL offers several on-demand resources for graduate students preparing for the job market, including guidance for creating teaching statements, diversity statements, and teaching portfolios. Completion of CTL's Teaching Development Program, noted on transcripts, provides evidence to potential employers of sustained pedagogical preparation. This year, the CTL also partnered with GSAS's Compass Career Development Office on a resume workshop to help participants frame and highlight their accomplishments in teaching. For students wishing to explore career paths in educational development and administration, the CTL ran a "Careers in Educational Development" panel and facilitated this year's "Teaching Transformations" conference for graduate students across 12 Ivy Plus institutions.

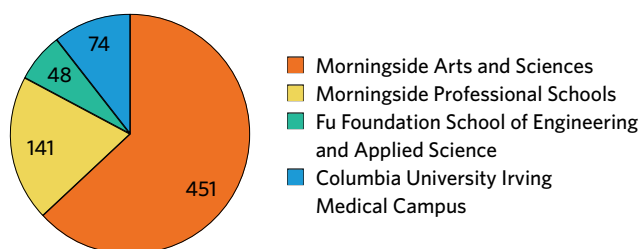## Peer-to-Peer Support: Expanding the CTL's Reach

This year, the CTL continued to build on the model of peer-to-peer teaching development support, allowing the Center to expand services and programming across the University while developing graduate student agency. Lead Teaching Fellows, mentored by Senior Fellows and overseen by the CTL, ran multiple workshops for peers in 33 departments across seven schools at Columbia. Senior Fellows designed and ran four robustly attended CTL Learning Communities for graduate students. Lastly, an expanded cohort of eight trained graduate student Teaching Consultants allowed the CTL to respond to a record number of requests for teaching observations, mid-course reviews, microteaching sessions, and teaching statement consultations.

Programs & Services

TEACHING DEVELOPMENT PROGRAM

The Teaching Development Program (TDP) allows Columbia doctoral and MFA students to cultivate, document, and articulate their teaching development across the arc of their graduate school career. Graduate students can participate in the TDP on either of two tracks: Foundational or Advanced. Over 150 students registered for the TDP in 2022–23, bringing the total active students in the TDP to 589. Since its inception, 66 graduate students have completed the Foundational Track of the program, and 41 graduate students have completed the Advanced Track.

Completion of a TDP track earns a letter outlining track competencies and certifying completion from the CTL. Completion is also noted on Columbia transcripts for doctoral students in Arts and Sciences, Columbia Engineering, the Mailman School of Public Health, the School of Nursing, the School of Social Work, and the School of the Arts.

Pie chart legend:
- Morningside Arts and Sciences — 451
- Morningside Professional Schools — 141
- Fu Foundation School of Engineering and Applied Science — 48
- Columbia University Irving Medical Campus — 74

779 Teaching Development Program participants (all-time) across Columbia

BEGINNING TO TEACH

The CTL offers programs and services throughout the year to help graduate student instructors build confidence in their teaching and engage with a community of peers. Through these offerings, graduate students practice a variety of techniques to facilitate learning within their teaching context, develop conceptual frameworks for their teaching, and discover a diverse array of resources to support students in their classroom. Participation in these programs and services with subsequent reflection helps to satisfy the Foundational Track requirements for graduate students enrolled in the Teaching Development Program.

Teaching Orientations

Teaching Orientations introduce graduate students to a range of teaching resources, procedures, and policies at the University, as well as practical, evidence-based pedagogical strategies that graduate students can implement on the first day of class. In Fall 2022 and Spring 2023, CTL offered orientation in the form of a series of five online, asynchronous modules addressing the following topics:

- Establishing instructional goals and an inclusive learning climate
- Clarifying TA roles and teaching support in a range of modalities
- Creating a policy sheet and a first day of class plan
- Considering common TA challenges and campus resources that help to navigate them
- Documenting next steps for teaching and professional development

161 graduate students accessed CTL's graduate student orientation in 2022–23. In addition to these on-demand modules, CTL ran optional, 60-minute live debrief sessions for participants to discuss module highlights, get individual feedback on policy sheets and plans for the first day of class, and engage in Q&A with CTL staff.

Essentials of Teaching and Learning Workshops

The Essentials sequence of workshops familiarizes graduate students with frameworks and tools they can use to facilitate student learning. Completion of the Essentials sequence is a requirement for completion of CTL's Teaching Development Program for graduate students. A series of asynchronous modules helps participants prepare for all live sessions.

Creating Inclusive Learning Environments: Participants learned about the key terms, frameworks, and principles of inclusive teaching, focusing on strategies and tools for including all students in the learning process.

Designing Learning Objectives: Participants learned about backward design, an end-in-mind approach to instruction to facilitate students' learning.

Active Learning: Participants practiced developing class activities aligned with learning objectives that incentivize all students to participate.

Assessment and Feedback: Participants learned approaches for assessing student learning and providing feedback that encourages students to focus more on their improvement and less on bottom-line scores.

Graduate students engage in an Essentials of Teaching and Learning workshop with CTL Assistant Director **Abby Schroering**.

Teaching Development Program Sprint

The Teaching Development Program Sprint (TDPS), held in June 2023, gave doctoral and MFA students the opportunity and space to complete all required components of the Foundational Track of the TDP in less than a week. This included completion of the Essentials of Teaching and Learning series, three advanced pedagogy workshops, a microteaching practice session, and first day of class plans. The Sprint also provided time for participants to discuss, write, and post reflections on what they learned.

In addition to giving graduate students a means for acquiring a foundation in evidence-based pedagogical practices, the Sprint also provided them with a mechanism for building community in and across disciplines. During this year's run, 40 graduate students from across the University gathered together in person for four full days of critical, sustained discussion and observation of one another's pedagogical practices.

ADVANCING YOUR TEACHING

Graduate students wishing to advance their teaching practice and engage more deeply with a community of peers can participate in a range of advanced programs, seminars, and institutes at the CTL. These offerings help participants engage with the scholarship of teaching and learning, apply conceptual frameworks and emerging technologies to innovate their teaching, and cultivate transferable professional skills. Participation in these offerings with subsequent reflection helps to satisfy Advanced Track requirements for graduate students enrolled in the Teaching Development Program.

Graduate students at the TDP Sprint.

Seminars

Seminars provide an opportunity for cohorts of graduate students to engage in a sustained series of conversations, modules, and workshops focused on selected topics in teaching and learning over the course of a semester.

This year, graduate students participated in the following seminars:

Inclusive Teaching Seminar

The Inclusive Teaching Seminar included five in-person convenings aligned with participation in an asynchronous MOOC. Participants developed a learning community for reflection with peers, created an inclusive environment to explore and reflect on their positionalities and biases, and built confidence in their abilities to develop, share, and discuss their personal approaches to inclusive teaching. Participants applied their learning by crafting a statement on inclusive teaching. (Fall 2022)

Graduate student participants in the Inclusive Teaching Seminar.

Participants in the Innovative Course Design Seminar undertake a variety of creative activities to structure an original course and share insights with each other in an interdisciplinary setting.

Innovative Course Design Seminar

The Innovative Course Design Seminar allowed participants to explore evidence-based, inclusive instructional design practices as they created a learner-centered syllabus to meet the challenges of teaching today. Participants collaborated to apply the principles of backward design to context-specific learning objectives, aligned and scaffolded assessments, and a range of learning activities engaging all learners. Their final syllabi used innovative formats to communicate their intentionality to students, including interactive websites and do-it-yourself puzzles. (Spring 2023)

Teaching as Research Seminar

This online seminar trained participants to assess the impact of teaching interventions in the classroom. Over the course of five asynchronous modules, participants gained proficiency in the Teaching as Research (TaR) method by defining an original research question, exploring data collection and assessment tools, and drawing on the support of peers and the instructor to draft a complete TaR proposal. The seminar culminated in the presentation of these proposals to the seminar cohort. (Spring 2023)

Advanced Topics in Teaching Workshops

In 2022–23, the CTL provided several advanced workshops to graduate students looking to acquire new pedagogical frameworks and to innovate their teaching.

Designing and Using Effective Rubrics
In this workshop, participants learned to apply an inclusive teaching lens to assessment design and feedback delivery through the development of rubrics. Participants explored three types of rubrics and tried their hand at developing an inclusive rubric for assessing student participation—an area often assessed, but at risk of being inconsistent or following opaque criteria. (TDP Sprint 2023)

Hacking the Classroom
In this session, participants learned about different classroom "hacks"—low- or no-cost spatial, pedagogical, and/or reflective interventions—that foster a positive classroom climate and support active learning. Participants came away with a robust toolkit of strategies to re-imagine and re-purpose the quality and suitability of their classroom environments. (TDP Sprint 2023)

How Can Technology Impact Learning?
During this session, participants engaged with some of the literature examining technology's impact on learning and considered how technology can bolster as

well as impede the development of accessible learning experiences. Participants left with considerations for choosing digital tools and engaging them intentionally and accessibly. (Fall 2022 and TDP Sprint 2023)

Identifying and Engaging Students' Prior Knowledge
In this session, participants considered the role of prior knowledge in their own teaching contexts and confronted a range of questions about how and why engaging students' prior knowledge matters. Participants then worked collaboratively to consider new approaches to encourage students to identify and engage students' relevant prior knowledge. (TDP Sprint 2023)

Inclusive Teaching Workshop Series
This series explored the principles and frameworks of inclusive teaching through guided debrief discussions based on the CTL's Inclusive Teaching MOOC. The MOOC was divided into five parts: establishing course climate, setting explicit expectations, inclusive course content, designing courses for accessibility, and cultivating critical reflection. (Fall 2022)

Learning to Observe: Effective Teaching Observations
This workshop provided participants with a model for conducting observations of teaching that focus on instructional intention and student engagement techniques, as well as insights about the observer's own teaching development through observational practices. (Spring 2023)

Making It Hard to Cheat
This workshop incorporated research suggesting that there are predictable conditions that can induce cheating, offering strategies to reduce cheating and even improve students' overall performance in our courses by fostering their own intrinsic motivations to learn deeply in our classes. (Spring 2023)

Syllabus from Scratch
Participants in this session explored key elements of an effective syllabus and defined learning goals and assessment methods to promote equitable student learning and set an inclusive course climate from the outset of class. (TDP Sprint 2023)

Teaching Through Discussion
In this workshop, participants identified and prioritized learning goals for discussion-based courses, created plans for preparing students for discussion, and developed assessment strategies to determine whether goals were met. (Spring 2023 and TDP Sprint 2023)

Teaching with Objects
In this session, participants considered teaching with "objects" such as artwork, manuscripts, visualized data analyses, or physical/manipulable models. Using example objects as case studies, participants identified ways that objects might meaningfully support students' achievement of learning objectives. Participants left with concrete strategies and a framework for facilitating students in equitable and meaningful analysis of teaching objects. (TDP Sprint 2023)

Ways of Knowing
In this interactive session aimed at graduate student instructors in STEM fields, participants engaged with contemporary educational research that suggests that STEM education implicitly and explicitly devalues ways of knowing that differ from those of the dominant culture. By the end of this session, participants defined a "way of knowing," explained their own ways of knowing, and applied frameworks for supporting knowledge diversity in multiple learning contexts. (TDP Sprint 2023)

"The workshop enabled me to think critically about how and why I use discussion. In other words, I was able to hone in on how discussion, as a form of active learning, fits into my teaching philosophy. On a smaller scale, I was also able to identify clear ways that I could adjust my teaching practice for the better: from identifying strategies for encouraging peer-to-peer discussion (e.g., asking "How would you build on a student's point?" or asking a student to summarize the main points, rather than doing so myself), to gaining an appreciation for the many forms that discussion can take. As a consequence, I feel much more confident in my ability to thoughtfully use discussion to achieve specific learning objectives. Overall, I gained many tools that will enable me to more thoughtfully and intentionally facilitate discussion within my classes. These tools ranged from the global— including ways of structuring discussions, and the three steps necessary to make any discussion effective—to the local—for instance, ways of responding to specific 'hot' moments, or enabling shy students to participate."

— **Anya Wilkening**, *Ph.D. Student, Department of Music, on the "Teaching Through Discussion" workshop*

"It was wonderful to connect with a community of graduate students and instructors who are enthusiastic about teaching and improving their ways of connecting with their students. I love attending the learning communities and other CTL workshops and events, because I always get to meet folks from across all departments on campus. Engineers, biologists, anthropologists, historians…It is rare for us to all be in one room together, and is a special, unique moment to learn from each other as we discuss how we teach our students and share with them our excitement for our research and passions. I have only found these moments to exist at the CTL, and they are so beautiful. I always leave having learned so much from my peers and workshop instructors. The learning community made me feel even more excited to be a teacher. I found myself exploring and brainstorming new ways to teach the same materials. The learning community on sensory learning really showed me how much room there is for creativity when developing pedagogy that is exciting, accessible and reaches students in different ways. Our learners are unique and diverse, and there is no single lesson that will perfectly fit all of them at once. Instead, we can use pedagogical techniques like sensory learning to provide many opportunities for our students to thrive in different formats of learning. This is a more exciting way to teach, and a more exciting way to learn."

— **Lian Kirit Limperis**, *Ph.D. Student, Department of Biological Sciences, on CTL Learning Communities*

Learning Communities and Journal Clubs

CTL Learning Communities and Journal Clubs are offerings for graduate students that build community around teaching development. They are designed to organically address graduate students' interests as they cultivate instructional practices in today's teaching and learning environments.

CTLgrads Learning Communities
Drawing on support from the CTL, Senior Fellows from the CTL's fellowship programs work in pairs to design and facilitate two sequential discussions on interdisciplinary teaching and learning topics. This year, Senior Fellows hosted the following learning communities for their peers:

Fall 2022

Beyond Participation: Inclusive Perspectives on Student Engagement and Feedback

- Tamara Hache, Latin American and Iberian Cultures
- Laura DiNardo, Italian

"Would You Ever Teach This?": Difficult Knowledge and Inclusive Teaching in the Classroom

- Valerie Hsieh, Physics
- Valeria Spacciante, Classics

Spring 2023

Teaching and Learning While Feeling like an Imposter

- Jacob Bergquist, Industrial Engineering and Operations Research
- Bovey Rao, Neurobiology and Behavior

Senior Lead Teaching Fellows Jacob Bergquist and Bovey Rao prepare to lead their CLTgrads Learning Community on Impostor Syndrome.

Making Sense of the Classroom: Strategies of Sensory Teaching and Learning

- Tomi Haxhi, Slavic Languages
- Elaine Wilson, Slavic Languages

CTLgrads Journal Club

The CTLgrads Journal Club for graduate students and postdocs meets every other week through the academic year. The sessions engage participants in group discussions of peer-reviewed, Discipline-Based Education Research articles and secondary syntheses of this research. Participants focus on how they can use education research to inform their own teaching practices in their fields and beyond.

This year, Journal Club sessions were held in a HyFlex (hybrid flexible) format and focused on the recently published volume *Teaching Gradually: Practical Pedagogy for Graduate Students, by Graduate Students* (Stylus, 2021)

which compiles articles on pedagogy written by a range of graduate students, including several at Columbia University.

1,882 Graduate student participants in CTL workshops

APPROACHING THE JOB MARKET

Approaching the Job Market Workshops

In the 2022–2023 academic year, the CTL offered self-paced modules to help graduate students represent their teaching experiences and priorities in applications, interviews, and campus visits. These asynchronous resources are available to Columbia graduate students any time they are seeking guidance and models. These modules include:

- Introduction to the Teaching Statement (187 registrants in 2022–23)
- Introduction to the Diversity Statement (139 registrants in 2022–23)
- Introduction to the Teaching Portfolio (59 registrants in 2022–23)

In addition, CTL ran live sessions to support graduate students preparing to represent their teaching on the job market. In 2022–23, these workshops included the following:

Teaching Statement Analysis Session: Participants who previously completed CTL's on-demand Introduction to the Teaching Statement module met with CTL staff and colleagues from other departments to collectively analyze excerpts from real teaching statements, and applied takeaways to their own teaching statement drafts. (Fall 2022)

Diversity Statement Analysis Session: Participants who previously completed CTL's on-demand Introduction to the Diversity Statement module met with CTL staff and colleagues from other departments to collectively analyze excerpts from real diversity statements, and applied takeaways to their own diversity statement drafts. (Fall 2022)

Building Your TDP Teaching E-Portfolio: In this session, participants learned about the functionality of the Columbia Digital Sandbox platform supported by

Columbia University Libraries, engaged with example e-portfolio templates, discussed best practices for showcasing their teaching development through visual and verbal media, and took the first steps toward setting up their own teaching e-portfolio to guide future work. (Fall 2022 and Spring 2023)

Careers in Education Development: Participants who were curious about the field of educational development as a career trajectory met with the CTL's Assistant Directors and Learning Designers to learn about their paths to careers in educational development and early experiences in this growing field. (Spring 2023)

SERVICES

The CTL offers a number of services to help graduate students at Columbia become reflective and effective instructors.

Consultations

Graduate students requested 945 one-on-one consultations with CTL staff to receive support for their teaching and learning needs. Common consultation topics included syllabus design, integrating instructional technologies into class activities, lesson planning, and creating and refining a teaching statement and diversity statement.

Microteaching

The CTL offered microteaching practice sessions for small groups of graduate students and postdocs to rehearse teaching practices and get direct feedback and support. These sessions were led by trained peer Teaching Consultants who had completed CTL training in microteaching facilitation.

"Ian Althouse [CTL Senior Assistant Director] was absolutely essential in turning every aspect of my application for an important teaching fellowship into the best it could be and I doubt I would have received it without his astute suggestions and guidance. He even went the extra mile by reviewing extra components and left no detail unchecked. He was able to do all this while preserving my own voice and priorities, helping me to learn how to properly phrase my pedagogical philosophies looking ahead to the job market as well."

— **Emily Fitzgerald**, *Ph.D. Student, Department of Religion, on her CTL Consultation*

A graduate student presenter is videotaped during microteaching to facilitate review and peer feedback.

92 graduate student participants in CTL Microteaching sessions

Mid-Course Reviews

The CTL offered Mid-Course Reviews (MCR) for graduate student instructors seeking quick, anonymous student feedback on their teaching. The confidential service paired instructors with a trained peer Teaching Consultant who solicited feedback directly from students in the instructor's course. Participants gained a clear picture of how their teaching practices are impacting students' learning in their course.

31 graduate student participants in CTL Mid-Course Reviews

"I wanted to know from an external and professional point of view about how my class was going. [The most valuable part of the experience was] getting to talk and discuss ideas with CTL people, who were friendly, professional, and helpful. It gave me an external point of view to consider my practices in a different light, as well as providing an efficient means of communication with my own students without the pressures of direct teacher-student power dynamics. Teaching is a continuous process of adaptation and requires very particular planning and strategic thinking."

— **José Antonio Cancino Alfaro**, *Ph.D. Student, Department of Classics, on his Mid-Course Review*

Student Spotlight

Chas Firestone East, *PhD, Department of Italian; 2023 Presidential Award for Outstanding Teaching*

CTL Teaching Observation Fellow, Senior Teaching Observation Fellow, and Teaching Consultant

This year you were nominated for—and later received— the Presidential Award for Outstanding Teaching. Huge congratulations on this prestigious distinction! What did you emphasize about your teaching when you received this nomination?

In my teaching statement, I highlighted my approaches to inclusive teaching and active learning. These are very common terms in the scholarship of teaching and learning that can be applied in many ways, so I made sure to emphasize what these big ideas have meant in my own teaching practice. Inclusive teaching for me is about treating every student as a true individual with their own background and ways of understanding that can contribute to everyone's learning in the classroom. It also means being aware of how my own background affects my interactions with the material and how to best adjust my methods to meet the needs of the different individuals I encounter. My idea of active learning plays into this practice of recognizing each student as an individual because it encourages me to change how material is being conveyed even in a single class session. Rather than make assumptions about how students were taught in the past or what their learning preferences are, I think about how I can incorporate visual, auditory, and interactive assignments into every lesson plan (and also how I can have people stand up and move around when possible).

What is an important focus of your teaching that the CTL has helped you to pursue or develop?

Whatever offerings you pursue at the CTL, you are going to learn new vocabulary about teaching practices and as a result help put into words what you have been experiencing as a student and instructor up to that point. While you tend to encounter this language for the first time in the CTL, I made a point to bring it very directly into the classroom, involving students in periodic discussions about how they are being taught in class that go beyond "wellness checks." College students are at a stage where they can have a thorough metacognitive awareness about their own strengths and weaknesses and how a class is being conducted, so I use these discussions to tear back the curtain on my own methods when explaining activities and make students more self-aware learners.

Looking back on your engagement with the CTL, you've participated in workshops and served as a Teaching Observation Fellow, Senior Teaching Observation Fellow, and a CTL Teaching Consultant. These opportunities have all demanded close work with colleagues from across campus. In what ways has interacting with peers strengthened your own teaching practices?

One of the main benefits of working with other graduate students as a Senior Teaching Observation Fellow and as a Teaching Consultant has been the highly interdisciplinary nature of our discussions. I have worked with graduate students in about every subject imaginable, and, as a consequence, I have been exposed to a variety of different practices in these disciplines. Obviously, I was not able to incorporate all of their tactics directly into my teaching, but these discussions have been important for me because they all revolved around how people form and communicate knowledge, regardless of the exact subject matter. In other words, working with graduate students in the CTL has made me aware of new perspectives and my own pedagogical blind spots. I also enjoyed the opportunity to share my own experiences in return and provide feedback to my peers, which has increased my confidence in my teaching philosophy and practices. While you are always interacting on a peer level, my time as a STOF and TC in the CTL has made me feel like an expert at least in my own brand of pedagogy.

Additionally, would you provide 2-3 recommendations from your own teaching practice that new graduate student instructors might consider incorporating into their own pedagogy?

Pull back the curtain on your teaching: When you are implementing a pedagogical strategy or simply setting up an activity in class, explain what you are doing and why, especially if you can make it a moment to talk about how people think and learn. Students may only have experience being a receptacle of knowledge and then later a regurgitator of it. If you share all the thought you have put into the practice of teaching, students will feel respected and more capable as learners of whatever approach is commonly used in your field.

Do some educational research: There is a large field of scholarship about teaching on both general and discipline-specific levels. Whenever you feel lost on a particular issue, try diving into a few articles for ideas. You will be surprised by how much your comfort and knowledge about teaching can be changed just by being conscious of key terms and issues in the scholarship on teaching and learning.

Don't go it alone: It is entirely possible to view yourself at the front of a classroom or the end of a seminar table as completely alone facing an audience. One can easily become entirely isolated in their teaching practice, especially when you have gotten into the groove of things. Get feedback from students, be observed by your peers, and attend a lecture or seminar every so often to make sure you are not the only voice and example in your head when you think about how teaching is done. Perhaps this is advice more for when you have been teaching for a while, but making it a habit early helps make it fundamental in your teaching practice.

Teaching Observations

Graduate students requested teaching observations to receive individualized feedback on their teaching. Through a structured process, trained peer Teaching Consultants observed instructors in the classroom and provided suggestions to improve their teaching. The CTL also worked with schools, programs, and departments seeking to refine their peer-to-peer teaching observation practices.

FELLOWSHIPS

CTL Fellowships provide Columbia doctoral students with paid, sustained professional development experience.

This year, the CTL offered the Lead Teaching Fellowship, the Teaching Observation Fellowship, and the Teaching Assessment Fellowship, and hosted GSAS Fellows in Academic Administration. In addition, it trained and supported a cohort of Teaching Consultants.

Lead Teaching Fellows

Lead Teaching Fellows design and facilitate teaching-related events and workshops for peers in their home departments with support from the CTL, and help connect their peers to CTL resources. The fellowship provides an interdisciplinary professional development experience for students across campus who are committed to exploring and advancing pedagogical practices.

This year, eight Senior Lead Teaching Fellows mentored a roster of 45 Lead Teaching Fellows as they designed and produced 89 teaching-related workshops and online resources across the University. See page 62 for a list of workshops facilitated by Lead Teaching Fellows for their schools and departments. Fellows also participated in a series of interdisciplinary gatherings with the CTL to plan and reflect on their departmental initiatives.

2022-2023 Senior Lead Teaching Fellows

Jacob Bergquist, Industrial Engineering & Operations Research	**Laura DiNardo**, Italian
Tamara Hache, Latin American & Iberian Cultures	**Tomi Haxhi**, Slavic Languages
Valerie Hsieh, Physics	**Bovey Rao**, Neurobiology & Behavior
Valeria Spacciante, Classics	**Elaine Wilson**, Slavic Languages

Senior Lead Teaching Fellows share insights about supporting their 'pods' of LTFs during the SLTF mid-term meeting at CTL.

The Senior Lead Teaching Fellows with CTL Senior Assistant Director **Caitlin DeClercq**.

Lead Teaching Fellows converse at the LTF Kickoff event.

2022-2023 *Lead Teaching Fellows*

Musa al-Gharbi, Sociology	**Nour Audi**, Population & Family Health
Anirbaan Banerjee, English & Comparative Literature	**Isabel Biascoechea**, Art History & Archaeology
Samara Burns, Philosophy	**José Antonio Cancino Alfaro**, Classics
Sarah Cohen, Art History & Archaeology	**Selden Cummings**, Writing (School of the Arts)
Emily Everett, Theatre (School of the Arts)	**Ramón Flores Pinedo**, Latin American & Iberian Cultures
Tamara Gedankien, Biomedical Engineering	**Ryan Golant**, Astronomy
Ellie Grabowski, French	**Adithya Gungi**, Physics
Sam Houskeeper, Political Science	**Javiera Irribarren Ortiz**, Latin American & Iberian Cultures
Eliza Jaeger, Biological Sciences	**Manasi Jayakumar**, Psychology
Yulia Kim, Slavic Languages	**Izzy Levy**, Classics
Zhenrui Liao, Neurobiology & Behavior	**Kirit Limperis**, Biological Sciences
Connor Martini, Religion	**Jennifer Mead**, Astronomy
Tahlia Pajaczkowska-Russell, Philosophy	**Sophia Pedatella**, English & Comparative Literature
Fitsum Petros, Mechanical Engineering	**Jilian Pizzi**, Italian
Garima Raheja, Earth & Environmental Science	**Kelsey Reeder**, Social Work
Megan Rivkin, Theatre (School of the Arts)	**Abhi Shah**, Neurobiology & Behavior
Kinnari Shah, Earth & Environmental Engineering	**Javairia Shahid**, Architecture, Planning & Preservation
Jessie Shohfi, Writing (School of the Arts)	**Elissa Sorojsrisom**, Ecology, Evolution & Environmental Biology
McKenzie Sup, Biomedical Engineering	**Iris Sybesma**, Chemistry
Didi Tal, Germanic Languages	**Stephen Uong**, Epidemiology
Matías Villagra, Industrial Engineering & Operations Research	**Anya Wilkening**, Music
Grant Woods, Music	**Yingchuan Yang**, East Asian Languages & Cultures
Diandian Zhao, Civil Engineering & Engineering Mechanics	

Teaching Observation Fellows

Teaching Observation Fellows work closely with the CTL, peer mentors, and each other across the academic year to assess and reflect on targeted elements of classroom teaching. The fellowship helps them to develop critical perspectives on the design, implementation, and assessment of teaching by observing peer instructors in various settings and offering structured feedback. Upon completing the fellowship, Teaching Observation Fellows are qualified to join a cohort of trained Teaching Consultants at the CTL in future years.

This year, two Senior Teaching Observation Fellows mentored 14 Teaching Observation Fellows. The Fellows participated in formal observations of one another's teaching, mid-course reviews for their TOF peers, microteaching practice sessions, and observations of faculty instructors.

2022-23 Senior Teaching Observation Fellow

Chas East, Italian	**Sara Samuel**, Sociomedical Sciences

2022-23 Teaching Observation Fellows

Luca Abbattista, Italian	**Amanda Althoff**, Anthropology
Adam Brooks, Social Work	**Martin Devaux**, Political Science
Ruilin Fan, English & Comparative Literature	**Anna Gasha**, Historic Preservation
Jo He, Psychology	**Hedwig Lieback**, Political Science
Giorgia Mirto, Anthropology	**Simone Paci**, Political Science
Aarushi Shah, Sociomedical Sciences	**Kate Suffern**, Theatre & Performance
John Thorp, Psychology	**Sonja Wermager**, Music

"The Lead Teaching Fellowship greatly expanded our knowledge of teaching, pedagogical development, and teaching resources available at Columbia, thus instilling in us a confidence to talk openly about teaching-related matters. With this confidence, we were able to establish a more dominant and continuous dialog regarding teaching within the Astronomy department. We were also able to connect with many students outside of our department through our shared interest in teaching. The material from the Learning Communities and workshops were particularly helpful when we thought about our own course design and reflected on our own teaching practices. Specifically, in the Astronomy lab course we co-taught in the spring semester, we were more conscious of how we approached grading and student engagement, how we discussed our pedagogical methods with the students, and how we could continually improve the structure of the course and our own instruction."

— **Ryan Golant** and **Jennifer Mead**,
   Ph.D. Students, Department of Astronomy

The 2022-23 Teaching Observation Fellows Kickoff gathering.

Some of the 2022-23 Teaching Observation Fellows.

The 2022–23 cohort of Teaching Assessment Fellows.

Teaching Assessment Fellows

Teaching Assessment Fellows are Columbia University doctoral students who work closely with the CTL during the academic year to support and assess teaching initiatives. Fellows engage directly with strategies and methodologies for evaluating the efficacy of teaching as they help to analyze the impact of teaching projects proposed by Columbia faculty and funded by the Office of the Provost as well as the impact of discrete CTL initiatives.

2022–23 Teaching Assessment Fellows and Project Assignments:

- **Lauren Bernard**, Music: "Use of Video-Based Reflection and Interactive Feedback to Improve Speaking in Foreign Language Classes" (Faculty: Zhongqi Shi, East Asian Languages & Culture)

- **Ana DiGiovanni**, Psychology: "Introducing Case-Based Teaching into Interdisciplinary Data Privacy Education" (Faculty: Rachel Cummings, Industrial Engineering & Operations Research)

- **Ana DiGiovanni**, Psychology, and Xiran Lu, Germanic Languages: "Exploring the TDP Sprint" (Center for Teaching and Learning)

- **Xiran Lu**, Germanic Languages, and Lauren Bernard, Music: "Assignment Builder for EconPractice and Adaptive E-Learning Assignments" (Faculty: Thomas Groll, School of International and Public Affairs)

- **Marissa Hicks**, Classics, and Ali Yalgin, Theatre & Performance: "Effective Videos for Higher Education" (Center for Teaching and Learning)

Teaching Consultants

Teaching Consultants are trained by CTL to provide classroom teaching observations, facilitate microteaching sessions, and run mid-course reviews for graduate students who request these services. In 2022–23, Senior Teaching Consultants mentored the Teaching Consultant cohort, provided consultations to graduate students, and worked with CTL on special projects.

2022-23 Senior Teaching Consultants

Zachary Domach, Religion	**Annie Potter**, Theatre & Performance

2022-23 Teaching Consultants

Chas East, Italian	**Isabella Livorni**, Italian
Cosima Mattner, Germanic Languages	**Hazel Rhodes**, Germanic Languages
Skye Savage, Germanic Languages	**Ben Silver**, Psychology

Student Spotlight

Ana DiGiovanni, *PhD Student, Department of Psychology, 2023 Presidential Award for Outstanding Teaching*

CTL Lead Teaching Fellow and Senior Teaching Assessment Fellow

What did you emphasize about your teaching in the Presidential Award for Outstanding Teaching process?

Because I believe that effective teaching transcends the classroom, in my teaching statement I emphasized the various ways in which I have engaged in teaching and mentorship at the university. Not only have I co-designed and co-taught a class that helps equip students with tangible research skills, but I also co-founded and helped run a summer internship program in psychology that is in its fourth year, and have also mentored dozens of undergraduate students on research projects throughout the school year. Across all of these different experiences, I try to create a safe and inclusive learning environment that is personalized to students' needs and emphasizes the bidirectional nature of learning. In all of my teaching and mentorship experiences, I learn as much from students as they learn from me, and I encourage students to have a say in the learning that occurs. Open communication is one of the most important things to me, and I strive to create environments where mutual respect is established. Moreover, in both my teaching and mentoring, I let students know that their personal well-being comes first, and this is reflected in lenient deadlines, ungraded assignments, and a generally relaxed and fun atmosphere that I try to bring into the learning environment. As a person who studies dyadic interactions and social support processes, I think I have learned a lot from my own research and that has informed the approaches I take as an educator.

What is an important focus of your teaching? How has the CTL helped you to pursue that focus?

I really try to make my teaching and mentoring fun. I think that at a place like Columbia, students can be so overwhelmed with achieving at a high level; striving for the A+, acquiring that prestigious internship, avoiding making mistakes, and so on. As a result, actual learning can get left behind in pursuit of perfection. I try to get students to let go of this desire to be perfect, and the CTL has given me a number of skills that I think make this doable. I use scaffolded approaches for larger assignments, I diversify the way I grade, I implement many ungraded or low-stakes assignments, and I give students the opportunity to share their opinions and life experiences. Students can be hesitant about some of these approaches at first, but I think that if you constantly "show up" as an instructor, and also try to let go of the need to be perfect yourself, students start to really learn along with you, rather than from you. This sort of approach doesn't work with all students, and I have had to learn to come to terms with that. Some students like a more traditional instructor/mentor and a more traditional classroom, but I think that overall this approach is one that makes both teaching and learning more fulfilling and impactful.

You have participated in multiple CTL fellowships—can you describe a couple of highlights from those experiences and how they have impacted your work?

Participating in CTL fellowships has honestly been a highlight of graduate school. I can't sing these fellowships' praises enough. One of my favorite things about these fellowships is that I get to meet so many people that I otherwise wouldn't have the opportunity to work with. Graduate school can be difficult and being siloed into just your department can sometimes also be a challenge for a number of reasons. As a Lead Teaching Fellow (LTF) and Senior Teaching Assessment Fellow (STAF), I was able to not only work alongside amazing CTL staff, but I also worked with graduate students across a range of departments. I really do believe that transdisciplinary work is the way of the future, and getting to hear insights from so many

diverse perspectives has opened my eyes to new ways of thinking and teaching. Especially when you teach introductory classes within your discipline (for me, this would be something like the Science of Psychology), you get a ton of students who aren't actually majoring in your field—it is in these instances where being able to think through the lens of fields other than your own that you are better equipped to teach students who have different ways of knowing.

Additionally, what are 2 or 3 strategies that you use in your own teaching practice that new graduate student instructors might consider incorporating into their own practice?

I have become obsessed with scaffolded learning. So many classes will give you a final project or essay that is worth a substantial portion of your grade, and this can often make students really nervous. With scaffolded learning, you introduce portions of the assignment throughout the semester, and students build on their work while receiving feedback throughout the year. Not only does this reduce anxiety, but it also makes students' final product markedly better. They also are able to see their own growth in a very tangible way, and I think that this is encouraging for students.

Another thing I have come to really believe in is spending a significant amount of time designing syllabi for classes. I participated in the Innovative Course Design Seminar with the CTL which was such a fun intensive workshop series. At the end, we all had to submit a syllabus for a class we would eventually teach and then received extensive feedback on it. We were meant to think about inclusive design, creating student-centered syllabi, and making the syllabus engaging, among other things. I ended up using what I created in this workshop series for a class I later co-taught, and we actually had students comment on how much they loved the syllabus. I think that when you spend the time making the syllabus a document that students can refer back to throughout the semester, you reduce the number of questions that you might get about different aspects of the class, ultimately making the workload a bit easier for you as an instructor.

Last, I think giving students the space to talk to each other is really important. Students sometimes don't love raising their hand and participating in class, but especially given the long-lasting social effects of the pandemic, students really appreciate it when they are given time to discuss topics with others in class through small-group work. This also gives students a break from having to listen to long lectures, which goes a long way in keeping students engaged.

2022-23 Teaching Consultants with CTL Senior Assistant Director **Ian Althouse**.

Fellows in Academic Administration

In 2022–23, in partnership with the Graduate School of Arts and Sciences, the CTL hosted one Fellow in Academic Administration to serve as Teaching Development Program (TDP) Analysts. In this capacity, the Fellow tracked and assessed TDP participant activities. She also collaborated with CTL staff to conduct a semester-long assessment project to quantify program impacts and understand participant experiences, and suggested strategies for communication, outreach, and administration.

2022–23 Teaching Development Program Consultants and Assessment Projects:

- **Rachel Cohen**, Ecology, Evolution & Environmental Biology: "TDP Completion and Roadblocks" (Fall 2022)

CUSTOMIZED PROGRAMS

In 2022–23, the Graduate Student Programs and Services team facilitated the following customized programming.

- Berick Center for Student Advising, Columbia Undergraduate Scholars Program: Inclusive Teaching and Mentorship Online, September 22, 2022
- Core Curriculum (2 sessions):
  - Core Preceptor Inclusive Teaching Session, September 1, 2022
  - Core Preceptor Inclusive Syllabus Design, New Preceptor Orientation, May 3, 2023
- Department of Economics: Inclusive Pedagogy for Summer Instructors, May 11, 2023
- Graduate School of Arts and Sciences Office of Academic Diversity and Inclusion: Building a Learner Centered Syllabus, OADI Summer Research Programs, May 8, 2023
- Lead Teaching Fellows and GSAS Compass: Building a Resume, April 11, 2023

Peer Observation Programs

The CTL runs Peer Observation Programs (POPs) in the Graduate School of Arts and Sciences' Teaching Scholars program and the Core Curriculum. POP participants pair up, observe one another's classes, and debrief with each other, drawing on guidance and instruments provided by the CTL. POP meetings in the CTL allow the full cohort of participants to prepare for and reflect on the peer observation process. CTL ran the following POP sessions in the 2022–23 academic year:

- Core POP Kickoff, October 20, 2022
- Teaching Scholars POP Kickoff, December 1, 2022
- Core POP Mid-year Meeting, February 22, 2023
- Teaching Scholars POP Mid-year Meeting, March 23, 2023

89 workshops and online resources created by Lead Teaching Fellows

860 graduate student participants in Lead Teaching Fellow workshops

LEAD TEACHING FELLOW EVENTS

Lead Teaching Fellow-led events serve graduate student instructors in their respective departments. Below is a list of events designed and facilitated by Lead Teaching Fellows in the 2022–23 academic year.

Architecture, Planning & Preservation

- Grading Party: Finding Your Inner Pedagogue (Javairia Shahid, Fall 2022)
- Negotiating Pedagogical Conundrums (Javairia Shahid, Spring 2023)

Art History & Archeology

- Something Old, Something New: Adaptive Course Design from the Survey to the Seminar (Isabel Biascoechea, Fall 2022)
- First-time Art History TA Orientation (Sarah Cohen, Fall 2022)
- Take Five! Strategies for the First & Last Five Minutes of Class (Isabel Biascoechea, Spring 2023)
- TAing and Teaching as a Non-specialist (Sarah Cohen, Spring 2023)

Astronomy

- Teaching Scientifically: Improving Your Teaching via the Scientific Method (Ryan Golant, Fall 2022)
- Modeling and Metacognition (Jennifer Mead, Fall 2022)
- Inquiry-based Learning: Teaching Students to Think like Scientists (Ryan Golant, Spring 2023)
- Grading for Growth in STEM (Jennifer Mead, Spring 2023)

Biological Sciences

- Improv(e) Your Classroom Communication (Eliza Jaeger, Fall 2022)
- Practicing the Art of Teaching Biology (Kirit Limperis, Fall 2022)
- Imposters Among Us: Teaching While Experiencing Imposter Syndrome (Eliza Jaeger, Spring 2023)
- Inclusive Teaching & Mentoring Workshop for the Biological Sciences (Kirit Limperis, Spring 2023)

Biomedical Engineering

- TA Orientation for BME Students, (Tamara Gedankien, Fall 2022)
- Boundaries and Well-being: How to Support Your Own Wellness While Also Supporting Your Students (McKenzie Sup, Fall 2022)
- TA for All: Inclusive Teaching in STEM (Tamara Gedankien, Spring 2023)
- Mentorship Strategies for PhD Students: From the Classroom to the Lab (McKenzie Sup, Spring 2023)

Chemistry

- Chemistry TA Forum (Iris Sybesma, Fall 2022)
- Resource: Scientific Mentoring Guidebook (Iris Sybesma, Spring 2023)

Civil Engineering & Engineering Mechanics

- Lab Mentoring 101 (Diandian Zhao, Fall 2022)
- Academic Integrity (Diandian Zhao, Spring 2023)

Classics

- (Neo) Latin: An Opportunity for a More Inclusive and Diverse Curriculum? (José Antonio Cancino Alfaro, Fall 2022)
- Beyond Masculine, Feminine and Neuter: Gender, Language and Inclusivity in the Latin and Ancient-Greek Classroom (Izzy Levy, Fall 2022)
- Speaking Latin? Challenges and Opportunities (José Antonio Cancino Alfaro, Spring 2023)
- Approaching Sexual Violence in the Classroom: An Instructors' Roundtable (Izzy Levy, Spring 2023)

Earth & Environmental Engineering

- Leveraging Informal Teaching Opportunities (Kinnari Shah, Fall 2022)
- Creating Inclusive Learning Environments in STEM (Kinnari Shah, Spring 2023)

Earth & Environmental Sciences

- Would've, Could've, Should've Taught It Differently (Garima Raheja, Fall 2022)
- Play! (Garima Raheja, Spring 2023)

East Asian Languages & Cultures

- Teaching Statement and Talking about Teaching in Job Applications (Yingchuan Yang, Fall 2022)
- Becoming a Teaching Scholar: Design and Teach Your Own Course (Yingchuan Yang, Spring 2023)

Ecology, Evolution & Environmental Biology

- Resource: Visual Literacy for Teaching and Learning, aka, Finally Learn How to Use Adobe Illustrator (Elissa Sorojsrisom, Fall 2022)
- Art of the Science Graphic (Elissa Sorojsrisom, Spring 2023)

English & Comparative Literature

- Teaching Humanities Research Skills in the Undergraduate Classroom: Some Recurring Challenges and Strategies to Address Them (Anirbaan Banerjee, Fall 2022)
- Reading as Labor (Sophia Pedatella, Fall 2022)
- Pedagogies of the Archive: Teaching the Theory and Practice of Archives through Classroom Assessment (Anirbaan Banerjee, Spring 2023)
- Oral History in the Humanities Classroom (Sophia Pedatella, Spring 2023)

Epidemiology

- Epidemiology Teaching Town Hall & A Short Primer to Planning for Your Teaching Development (Stephen Uong, Fall 2022)
- Epidemiology Teaching Lunch & Chat (Stephen Uong, Spring 2023)

French

- Grading and Equity in the Language Classroom (Ellie Grabowski, Fall 2022)
- Leading Class Discussion(s) (Ellie Grabowski, Spring 2023)

Germanic Languages

- Trauma Conscious Teaching: Preparing to Teach Difficult Topics in the Language Syllabus (Didi Tal, Fall 2022)
- Resources for Teaching Difficult Topics in the German and Yiddish Language Classroom (Didi Tal, Spring 2023)

Industrial Engineering & Operations Research

- TA Basics and What-if Scenarios (Matías Villagra, Fall 2022)
- Let's Talk about Grading (Matías Villagra, Spring 2023)

Italian

- Bias in the Classroom: Problem Solving and Building a Respectful, Productive, and Inclusive Learning Environment (Jilian Pizzi, Fall 2022)
- Metacognition and Inclusive Learning: How to Think, Not What to Think (Jilian Pizzi, Spring 2023)

Latin American & Iberian Cultures

- Promote Diversity and Inclusion in the Classroom (Ramón Flores Pinedo, Fall 2022)
- Promoting Social Engagement in Language (and Culture) Classes (Javiera Irribarren-Ortiz, Fall 2022)
- Avoiding Bad Practices when Writing Responses and Papers (Ramón Flores Pinedo, Spring 2023)
- Teaching Experiences in LAIC: Lunch & Conversation (Javiera Irribarren-Ortiz, Spring 2023)

Mechanical Engineering

- How to Grade: The Art of Giving Fair Feedback (Fitsum Petros, Fall 2022)
- How to Be a TA: Imparting Wisdom (Fitsum Petros, Spring 2023)

Music

- Putting Text First: Incorporating Primary Sources into the Music Classroom (Anya Wilkening, Fall 2022)
- Dealing with Plagiarism: Strategies for Maintaining Academic Integrity (Grant Woods, Fall 2022)
- Musical Microteaching (Anya Wilkening, Spring 2023)
- Teaching Music Classes in the Age of ChatGPT (Grant Woods, Spring 2023)

Neurobiology & Behavior

- Teaching Math: Challenges and Perspectives in Quantitative Pedagogy (Zhenrui Liao, Fall 2022)
- Teaching with Tools: How to Create Effective Slides, Handouts and More (Abhi Shah, Fall 2022)
- Resource: Lesson Planning for Quantitative Courses (Zhenrui Liao, Spring 2023)
- Learning to Teach with ChatGPT (Abhi Shah, Spring 2023)

Philosophy

- Philosophy Teaching Assistant Town Hall (Samara Burns, Fall 2022)
- Building the Confidence of Strugglings Students: Strategies for Intervening and Creating an Inclusive Classroom (Tahlia Pajaczkowska-Russell, Fall 2022)
- Using Rubrics to Assess Philosophical Writing (Samara Burns, Spring 2023)
- Self-assessment and Fairness in Grading Class Participation (Tahlia Pajaczkowska-Russell, Spring 2023)

Physics

- Make Columbia Learn Again: Feedback and Assessment in the STEM Classroom (Adithya Gungi, Fall 2022)
- Resource: Alternative Assessments in STEM Lab Classes (Adithya Gungi, Spring 2023)

Political Science

- Teaching Writing and Content at the Same Time (Sam Houskeeper, Fall 2022)
- The Basics of Inclusive Teaching (Sam Houskeeper, Spring 2023)

Population & Family Health

- Acquiring Leadership Competencies in Public Health Practice (Nour Audi, Fall 2022)
- Learning and Teaching Collective Leadership Competencies in Public Health: An Interactive Resource (Nour Audi, Spring 2023)

Psychology

- Agency as a TA: Building Relationships with Our Students and Creating Inclusive Learning Environments (Manasi Jayakumar, Fall 2022)
- CU Psych Resources for Teaching and TAships (Manasi Jayakumar, Spring 2023)

Religion

- Beyond the Reading Response: Innovative Assignments for Religious Studies (Connor Martini, Fall 2022)
- Religion Department Syllabus Design Workshop (Connor Martini, Spring 2023)

Slavic Languages

- Your Teaching Self (Yulia Kim, Fall 2022)
- Language Teaching Orientation / Lecturer Search Debrief (Yulia Kim, Spring 2023)

Social Work

- Columbia School of Social Work (CSSW) Student Teaching Development (Kelsey Reeder, Fall 2022)
- Teaching When You're Struggling: Paradigms of Care Ethics for Yourself and Your Students (Kelsey Reeder, Spring 2023)

Sociology

- Navigating Politics in the Classroom (Musa al-Gharbi, Fall 2022)

Theatre (School of the Arts)

- Feedback Models for Workshop Classes (Emily Everett, Fall 2022)
- Best Practices for Facilitating New Work Readings Over Zoom (Megan Rivkin, Fall 2022)
- Feedback Models for Workshop Classes 2: Teaching in Practice (Emily Everett, Spring 2023)
- Resource for Self-Reflection and Feedback in Workshop Courses (Megan Rivkin, Spring 2023)

Writing (School of the Arts)

- Creative Writing Microteaching Workshop (Selden Cummings, Fall 2022)
- Conquering the Blank page: Strategies for Inviting Student Writing (Jessie Shohfi, Fall 2022)
- Practice Teaching (Selden Cummings, Spring 2023)
- The Art of Giving Feedback: Moderating Workshop Discussion in Sensitive Situations (Jessie Shohfi, Spring 2023)

Support for Instructional Technologies

The CTL Instructional Technologies group works collaboratively with Columbia instructors and CTL colleagues to support teaching and learning through the purposeful use of media and technology, engaging in a range of projects requiring software development, interface and experience design, media production, and project management.

The group is composed of two teams: the Media Production team and the Software Development and Design team. Leveraging their extensive experience, both teams build digital experiences that augment the curriculum, exploring how technology and media can improve and enhance the student's learning experience. All CTL projects adhere to best practices, using well-documented processes to create efficient, effective, and accessible content, tools, and resources. Where possible, projects are shared to the benefit of audiences beyond the University.

The group advocates for and oversees a range of educational technology platforms. Members of the group represent the CTL at the University's IT Leadership Council and the Academic Technologies Leadership Group. The group ensures that the CTL's practices are compliant with University policies around accessibility, identity protection and data stewardship, issues that have become critical and complicated.

Drew Youngren, Lecturer in the Discipline of Applied Physics and Applied Mathematics, demonstrates 3Demos at the Celebration of Teaching and Learning Symposium.

SUPPORT FOR PROVOST'S FUNDED TEACHING AND LEARNING GRANTS

The Instructional Technologies group is an essential resource for the Provost's Funded Teaching and Learning Grant projects, including the Innovative Course Design funded projects and the Massive Open Online Courses (MOOCs) funded projects. The group provides project management, media production, design, software development and technology expertise to faculty partners. See page 22 for the full list of 2022–23 Provost's Funded Teaching and Learning Grant projects.

Below are highlighted projects from the Instructional Technologies group in the 2022–23 academic year. View the links to the project sites as well as the links to the CTL Portfolio to learn more about each project.

3 Demos: Bringing Interactivity to Visualizations in Calculus

The CTL worked with Drew Youngren, Lecturer in the Discipline of Applied Physics and Applied Mathematics, on this Innovative Course Design project to bring interactivity to visualizations in calculus. The application provides a 3D-environment where the instructor and students can create vectors, curves, graphs, and surfaces that can be adjusted by changing various parameters. One of the key features is the ability for instructors to broadcast any visual elements to a virtual classroom, providing students with the space to edit or add to the objects being broadcast. This collaborative editing space deepens student engagement with the material and enriches the learning experience.

URL: https://3demos.ctl.columbia.edu/

Locus Tempus

Locus Tempus, an open-source digital mapping tool, is designed to facilitate map-based learning activities across disciplines by engaging students as repository builders, researchers and curators. In February 2023, Locus Tempus introduced two additional features: search and time-filter functionalities. These enhancements allow students and instructors to associate dates with event markers on maps and analyze them temporally. The implementation of these features was a collaboration
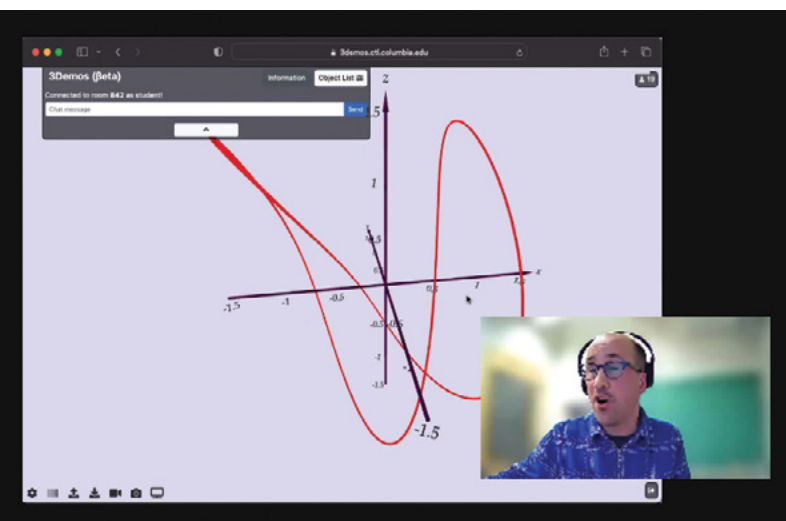
between the CTL, Professor Ari Goldman and Adjunct Assistant Professor Gregory Khalil of the Journalism School. Professors Goldman and Khalil integrated Locus Tempus into their class, Covering Religion, enabling their students to gain a deeper understanding of the neighborhoods they explored in Israel and Palestine.

URL: https://locustempus.ctl.columbia.edu

PORTFOLIO: https://portfolio.ctl.columbia.edu/our-work/locustempus/

EconPractice

EconPractice is an online environment for authoring and interacting with economic concepts, developed in 2018 by the CTL and Thomas Groll, Senior Lecturer in the Discipline of International and Public Affairs. In 2023, the CTL developed the assignment builder feature for instructors to create assignments consisting of both traditional graph-based EconPractice questions and new supplemental questions that provide additional learning materials in the form of embedded media.

URL: https://econpractice.ctl.columbia.edu

PORTFOLIO: https://portfolio.ctl.columbia.edu/our-work/econpractice/

Statify: Inquiry-Based Simulations in Frontiers of Science

Statify is an online repository of simulations that allow students to explore statistical concepts by experimenting with different variables and sample sizes. Originally developed by Frontiers of Science faculty Nicholas Bock, Vincent FitzPatrick, and Debora Monego, these simulations have been re-developed as part of a Course Design+SOLER grant to be more dynamic and incorporate instructional materials as part of the experience. The simulations will be embedded within inquiry-based learning activity to be conducted in Frontiers of Science seminar sessions.

URL: https://statify.ctl.columbia.edu/

The Whys and Hows of Exceptional Scholarship and Research Data

The Whys and Hows of Exceptional Scholarship and Research Data course introduces learners to principles of structured research data management. This Provost-funded grant project is a collaboration with the CTL and Columbia University Libraries, represented by Jonathan O. Cain, Jeremiah Trinidad Christensen, and Moacir P. de Sá Pereira, and was in further development in 2022–23. The course

will have synchronous and asynchronous versions with the purpose of teaching Columbia researchers how to evaluate and assess their research data management needs. The course will be delivered in CourseWorks with seven modules which include videos animating a data science principle or concept.

Learning Greek from the Streets

CTL staff continue to work with Nikolas Kakkoufa, Lecturer in Modern Greek, on this Large-Scale teaching and learning grant project. The project will realize his vision of using the Athens graffiti and street art landscape to connect students to Modern Greek language and culture, cultivate alternative reading skills, and promote emotional and critical literacies.

Logic Learner

Developed in 2022 in collaboration with Computer Science faculty Nakul Verma and Ansaf Salleb-Aouissi, Logic Learner is an online learning tool that provides students with adaptive feedback when solving propositional logic proofs. In 2023, Logic Leaner debuted to over 400 students across four sections of the Discrete Mathematics course taught by Professors Salleb-Aouissi and Verma.

URL: https://logiclearner.ctl.columbia.edu

PORTFOLIO: https://portfolio.ctl.columbia.edu/our-work/logiclearner/

International Students Onboarding and Immigration Compliance

The CTL worked with the International Students and Scholars Office (ISSO) to reimagine immigration-related online learning modules. The CourseWorks-based series, supported by a Large-Scale Teaching and Learning Grant, will help some 17,000 students worldwide with a focus on lessening anxiety as they prepare to study in the United States. The first few courses cover applying for visa documents and obtaining employment authorization for Curricular Practical Training and Optional Practical Training. The series will consist of videos, knowledge self-checks and quizzes. Students can select options that best apply to them, then receive customized information and guidance.

Footprints

Originally developed in 2015 in collaboration with Marjorie Lehman, Associate Professor at Jewish Theological Seminary, and Michelle Margolis, Librarian at Columbia University Libraries, Footprints is a database
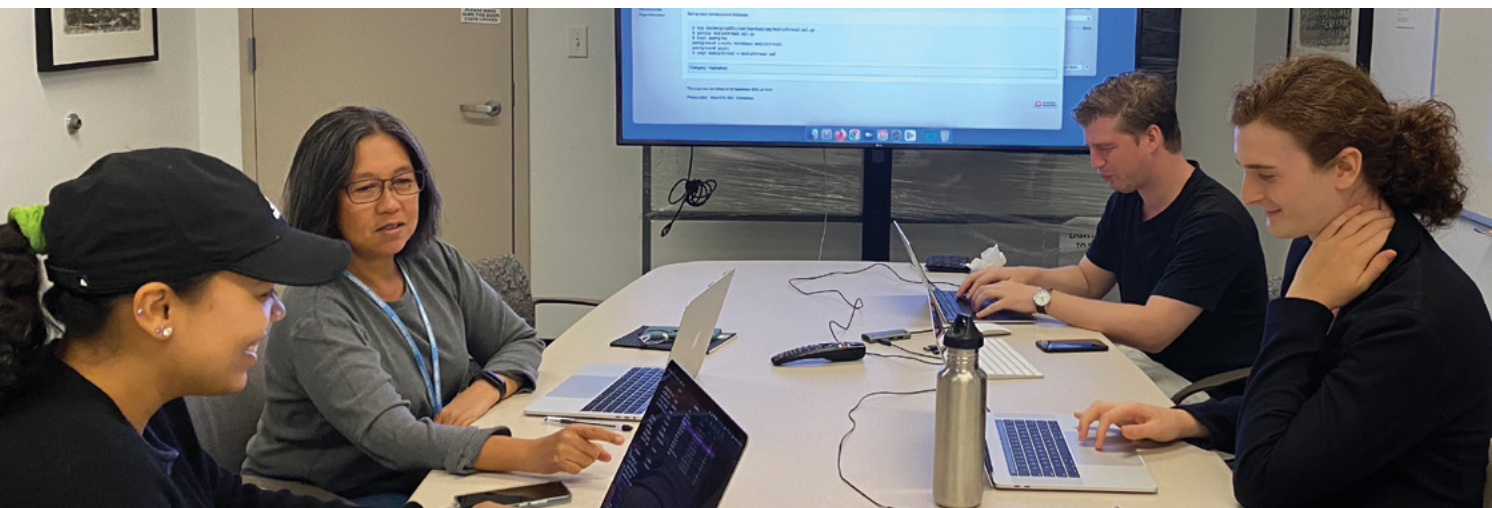
The CTL Mediathread development team working on improving Mediathead's accessibility scores using a report compiled and submitted by Stanford University, where the Mediathread platform is also being used.

that tracks the circulation of printed Jewish books through time and space. In August 2022, a new gallery-view search feature was added to the Footprints project to offer a more navigable search of "footprints" (records of Jewish books) and a more inviting user experience. In May 2023, the Footprints project received the Digital Innovation Award from the Renaissance Society of America (RSA). The award recognizes excellence in digital projects that support the study of the Renaissance.

URL: https://footprints.ctl.columbia.edu

PORTFOLIO: https://portfolio.ctl.columbia.edu/our-work/footprints/

Mediathread

Mediathread, a collaborative media analysis and annotation platform and tool developed at the CTL, allows students to focus closely on multimedia objects from a range of digital collections and work with them in a course-specific analysis space. In 2022, the CTL development team made improvements to Mediathread's accessibility using a report compiled and submitted by Stanford University, where the Mediathread platform is also being used. Mediathread was used in a total of 72 courses across different universities this year.

URL: https://mediathread.ctl.columbia.edu

PORTFOLIO: https://portfolio.ctl.columbia.edu/our-work/mediathread/

Quizzing with Confidence

Launched in 2021, Quizzing with Confidence provides an alternative to traditional multiple choice questions by allowing students to indicate their confidence in one of three choices. The application fully integrates with CourseWorks to provide a seamless experience for students and for faculty reviewing submissions. In 2022, enhancements to the Quizzing with Confidence platform were completed by CTL staff, including a new Timer feature that allows instructors to administer time-limited quizzes, and a revamped homepage with improved navigation and highlights of the tool's capabilities.

URL: https://quizcon.ctl.columbia.edu

PORTFOLIO: https://portfolio.ctl.columbia.edu/our-work/quizzing-with-confidence/

The redesigned QuizCon homepage showcases the platform's features.

MASSIVE OPEN ONLINE COURSES (MOOCS)

The CTL provides comprehensive production and media support for the design, creation, and delivery of MOOCs.

MOOC Debuted in 2022–23:

Frontiers of Science: Climate & Us

David Helfand, *Professor of Astronomy*

The CTL collaborated with David Helfand and Ivana N. Hughes, Director of Frontiers of Science, to produce and release Frontiers of Science: Climate & Us, one of four planned courses adapted from Frontiers of Science, one of The Core Curriculum courses at Columbia. The course, launched on October 19, 2022, challenges students to think about the world around them, and the ways in which science can help us answer questions about nature and ourselves.

URL: https://www.edx.org/course/fos4-climate-and-us

MOOCs in Production in 2022–23:

Columbia Public Health Advocacy Academy

Terry McGovern, *Harriet and Robert H. Heilbrunn Professor and Chair of the Heilbrunn Department of Population and Family Health*

The CTL has been collaborating with Mailman School of Public Health faculty Terry McGovern and Heather Krasna, Adjunct Assistant Professor of Health Policy

and Management, to create a first-of-its-kind course that guides learners in the principles and practices of public health advocacy. The course, which plans to launch in Fall 2023, will equip learners with practical knowledge of public health policymaking, tactics for building coalitions and influencing elected officials, and lobbying skills to affect public health policy.

MEDIA PRODUCTIONS

The media team produces impactful videos for online courses, resources for instructors, and promotional materials that leverage digital pedagogy and expand the CTL's visibility. The media team has established their expertise as producers and practitioners in the field of classroom and online teaching and learning. Their work focuses on leveraging video and exploring new technologies to produce course content that maximizes learning and follows best practices for digital accessibility.

Media Projects in 2022–23

Dead Ideas in Teaching and Learning Podcast Series

The media team worked closely with CTL Executive Director and host Catherine Ross to produce seasons 5 and 6 of the *Dead Ideas In Teaching and Learning* podcast series. Read more about the podcast on page 18.
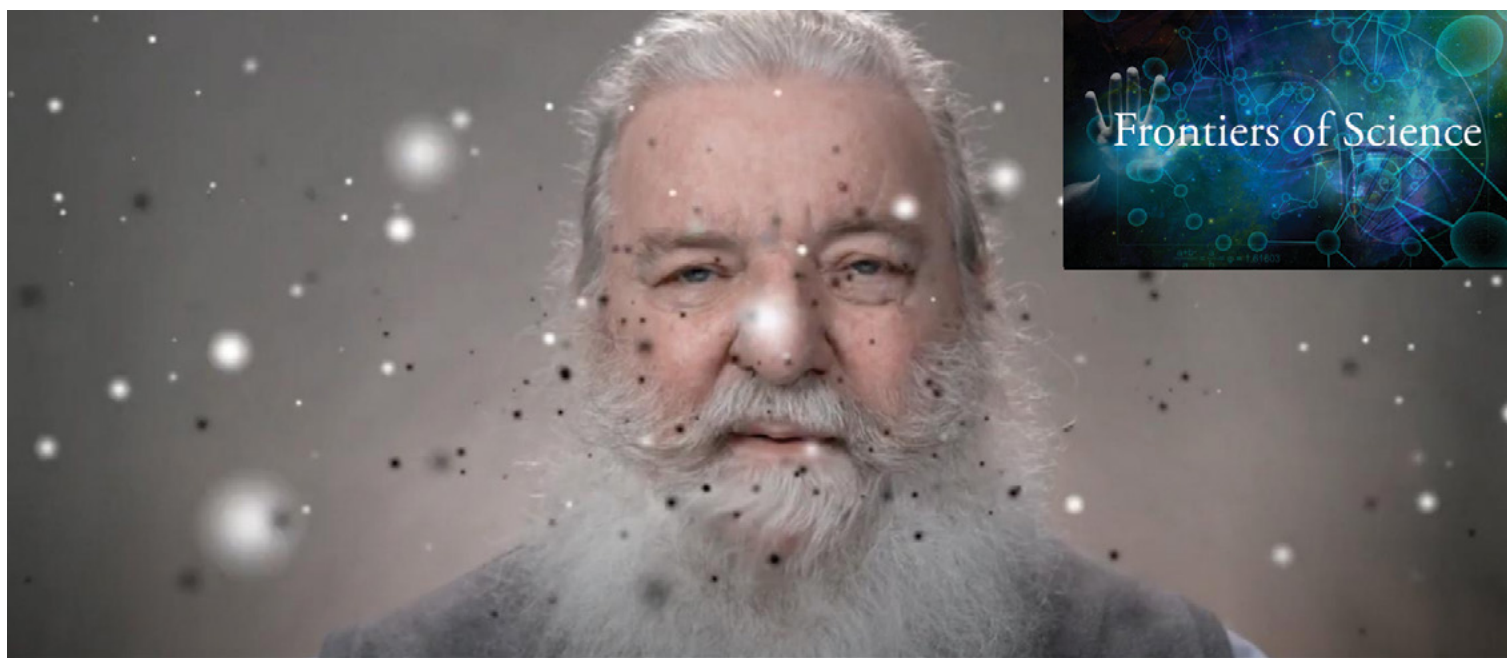
A still frame from an animation in "Frontiers of Science: Climate & Us" with Professor **Helfand**, illustrating how airborne particles absorb or reflect incoming sunlight.

Members of the CTL media team capturing the Provost's Conversation on Online Learning with speaker Joel Podolny, CEO of Honor Education.

The media team managed, filmed, and produced videos for the following CTL and Office of the Provost events and initiatives:

- Anti-Racist Pedagogy in Action: A Columbia Faculty Panel
- Celebration of Teaching and Learning Symposium, including three webinars and one in-person panel
- New Faculty Orientation, in collaboration with the Office of the Vice Provost for Faculty Advancement
- Provost's Conversation on Online Learning with speaker Joel Podolny, CEO of Honor Education
- Teaching and ChatGPT Forum
- Teaching Transformations: Faculty Reflections and Insights on Pandemic Practices

The media team managed, filmed, and produced videos for the following Office of the Provost Teaching and Learning Grant projects:

- Ari Goldman (Journalism): "Covering Religion"
- Jonathan Cain (Libraries): "The Whys and Hows of Exceptional Scholarship and Research Data"
- Martha Sliwinski (Physical Therapy): "Developing Capacity and Digital Modules to Expand Self Compassion and Mindfulness Practice for Health Practitioner Students"
- Jean-Marie Alves-Bradford (Psychiatry): "Developing an Upstander Curricular Thread Throughout the Medical School Curriculum"
- Taylor Sewell (Pediatrics), Carri Chan and Peter Tollman (School of Business): "Healthcare Management, Design, and Strategy"

Technology Platforms and Support

The Instructional Technologies group led several infrastructure and equipment updates dedicated to client service and ease of use in both software and hardware. The group also performed software development work on digital accessibility in the project process.

The team upgraded the CTL's instructor-facing Do-It-Yourself (DIY) media services by providing the first media equipment loaner services and improving the DIY Recording Studios and reservation system for the DIY Butler Studio on the Morningside campus, and the CUIMC Studio at Columbia's Medical Campus. The user friendly services, best practice guides, and reservation system make it easier for instructors to produce content for their courses.

The team successfully implemented a significant transition to the HubSpot Service Desk, which consolidated the client-relations functionalities within HubSpot, the CTL's customer relationship management (CRM) software. This strategic move enhanced CTL staff's ability to efficiently respond to Columbia instructor requests, while also providing improved reporting capabilities.

Furthermore, the team successfully streamlined the CTL's legacy public-facing knowledge base by migrating from Uservoice to the HubSpot Service Hub Knowledge base, now accessible at support.ctl.columbia.edu. This consolidation effort has allowed the CTL to centralize its knowledge base management, facilitating a more seamless and user-friendly experience for Columbia instructors.

The group reflects and writes about its work in service to teaching and learning on the CompilED blog.

Read more: https://compiled.ctl.columbia.edu

Internal and External Engagement ———

Publications

- Ali, I., Berliner, L., Brown, S., Choi, S., Goldman, T., Hentrich, N., & Lee, R. (2023). Spotlight: Critical media pedagogies scholarly interest group. *Journal of Cinema and Media Studies*. 62(2).

- Breyre, A. M., Vertelney, H., Sporer, K. A., Davenport, G. A., Issacs, E. D., & Glomb, N. W. (2022). Emergency medical service interpretation of Physician Orders for Life-Sustaining Treatment (POLST) in cardiopulmonary arrest. *Journal of the American College of Emergency Physicians Open*, 3(2). https://doi.org/10.1002/emp2.12705

- Cavallo, S. E., Cruz, L. E., Kim, J., & Brua, C. (2023). Through many doors at once: Rethinking the multiverse of graduate student professional development. *Studies in Graduate and Postdoctoral Education.*

- Chen, C. V. H.-H., Althouse, I., Declercq, C., & Phillipson, M. (2023). Managing programmatic trade-offs for centers of teaching and learning: Applying a segmentation, targeting, and positioning approach to pedagogical offerings. *To Improve the Academy: A Journal of Educational Development*, 42.

- Kim, J., & Klaf, S. (2023). How can students-as-partners work inform assessment? *International Journal for Students as Partners*. 7(1).

- Pandit, K., Healy, E., Todman, R., Kingon, A., Wright, M., Raymond, M., Hill, J., Jeffrey, J., Papanagnou, D., & Tedeschi, C. (2023). Disaster triage skills training: An introductory virtual simulation for medical students. *Cureus*, 15(5), e39417. https://doi.org/10.7759/cureus.39417

- Ross, C., & Verbeke, K. (2022). Special advice for educational developers: Connection with Others during a Focused Retreat. In R. Pope-Ruark (Ed.), *Unraveling Faculty Burnout: Pathways to Reckoning and Renewal* pp. 200-202). Johns Hopkins University Press.

- Ross, C., & Verbeke, K. (2022). Special advice for educational developers: Legacy reflection as an antidote to burnout. In R. Pope-Ruark (Ed.), *Unraveling Faculty Burnout: Pathways to Reckoning and Renewal* (pp. 193-195). Johns Hopkins University Press.

- Schroering, A. (2022). Writing as a team sport: Cultivating community in the online writing classroom. In L. Gray-Rosendale & S. Rosendale (Eds.), *Go Online! Reconfiguring Writing Courses for the New, Virtual World* (pp. 71–81). Peter Lang. https://doi.org/DOI 10.3726/b19797

Conference Presentations and Invited Workshops and Discussions

- Althouse, I. (2023, January). *Essentials of Teaching and Learning: Encounter, Engage, Reflect*. Invited workshop series for the Masters in Design Studies capstone course at CENTRO, Mexico City, Mexico. (Online)

- Althouse, I. (2023, June). *Centering Student Experience: Meaningfully Enhancing Student Learning Through Educational Technologies* [Keynote address]. Empowering University Education with e-Learning Technologies Symposium, City University of Hong Kong (CityU), Hong Kong, China. (Online presentation, Hybrid symposium)

- DeClercq, C. (2022, November). *Reinhabiting and Rethinking Learning Spaces for Engagement and Inclusion*. 47th Annual POD Network Conference,Seattle, WA.

- Foo, J. C. (2023, May). *Small Changes to Foster Inclusive Teaching in Science and Engineering*. Invited workshop for Science and Engineering faculty at the City University of Hong Kong (CityU), Hong Kong, China.

- Foo, J. C. (2022, November). *Career Panel for Cornell Center for Teaching Innovation (CTI) Fellows*. Cornell University, Ithaca, NY. (Online)

- Foo, J. C., & Chen, C. V. H.-H. (2022, November). *Re:Imagining Educational Development Opportunities for STEM Lab Instructors* [Roundtable Discussion]. 47th Annual POD Network Conference, Seattle, WA.

- Hentrich, N., Blaylock, J., & Jacobson, L. (2023, April). *Experiments in (Un)grading: Alternative Grading Practices for New and Seasoned (Un)graders* [Workshop]. Society for Cinema and Media Studies Conference, Denver, CO.

- Irvin, A. (2023, April). *The rapidly evolving landscape of AI in university teaching, learning, and assessment* [Panel]. City University of Hong Kong (CityU),

Hong Kong, China. (Online)

- Kim, J., Donahoe, E., Willingham-McLain, L., Qi, J., & Wyman, A. (2022, November). *Reimagining Connections Through Student-Faculty Partnership: What are the Possibilities?* [Special Interest Group session]. 47th Annual POD Network Conference, Seattle, WA.

- Kim, J., Ross, C., & Althouse, I. (2022, November). *Catalyzing Instructional Change Through Podcasts: Educational Development Reimagined* [Conference session]. 47th Annual POD Network Conference, Seattle, WA.

- Klaf, S. (2022, November). *Reimagining Our Offerings: Micro Educational Development*. 47th Annual POD Network Conference, Seattle, WA. (Online)

- Klaf, S., Cook-Sather, A., Reynolds, B., and Jardine, H. (2022, November). *Reimagining Connections Through Student-Faculty Partnership: What are the Possibilities?* 47th Annual POD Network Conference, Seattle, WA. (Online)

- Nyby, N. (2022, October). *EconPractice: JSXGraph in a Learning Platform for Economics*. International JSXGraph Conference. (Online)

- Nyby, N. (2023, March). *3Demos: A Collaborative Visual Calculus System*. LibrePlanet 2023, Boston, MA.

- Petitti, R., Davenport, G., & Irvin, A. (2022, November). *Assessing the Effectiveness of On-Demand Resources* [Roundtable Discussion]. 47th Annual POD Network Conference, Seattle, WA.

- Ross, C., Petitti, R., & DeClercq, C. (2022, November). *Inward & Outward: Reimagining and Reconnecting Our Communities Through a Podcast, a PODTalk*. 47th Annual POD Network Conference, Seattle, WA.

- Ross, C. (2022, December). *Dead Ideas in Teaching and Learning*. PODFest. (Online)

Representation at Conferences and Events

- 47th Annual POD Network Conference *Re:Imagine, Re:Connect, and Re:Start*. November 14-18, 2022 (Online).

- 47th Annual POD Network Conference *Re:Imagine, Re:Connect, and Re:Start*. November 16-20, 2022 (Seattle, WA).

- Academy for Innovative Higher Education Leadership Alumni Dinner. April 12, 2023 (Washington, D.C.).

- American Council on Education (ACE) Annual Meeting. April 13-14, 2023 (Washington, D.C.).

- American Society for Engineering Education (ASEE) 2023 Annual Conference & Exposition *The Harbor of Engineering Education for 130 Years*, June 25-28, 2023 (Baltimore, MD)

- Fall 2022 CIRTL General Meeting, October 13-14, 2022 (Madison, WI).

- Spring 2023 CIRTL General Meeting, April 13–14, 2023 (Boulder, Colorado).

- Leveling the Learning Curve, Columbia University School of International Affairs, May 4-5 (New York City).

- Association of College and University Educators (ACUE) Higher Education Teaching Conference (New York City).

- Society for Cinema and Media Studies (SCMS) Annual Meeting. April 12-15, 2023 (Denver, CO).

Columbia University Committee Work

- Anirudh, D.
  - Information Technology Leadership Council (ITLC)
- Foo, J. C.
  - CC-SEAS Academic Integrity Working Group
  - SEAS Committee on Instruction (COI)
- Hentrich, N.
  - Academic Technologies Leadership Group (ATLG)
  - Ally Working Group
- Irvin, A.
  - Academic Technologies Leadership Group (ATLG)
  - CUIMC Education Resource Committee (ERC)
- Kingon, A.
  - CUIMC Education Resource Committee (ERC)
  - CUIMC Education Technology Advisory Committee (ETAC)
  - VP&S Educate Curriculum Committee
  - VP&S Curriculum Re-Imagining Creative Workgroup
  - VP&S Curriculum Re-Imagining Assessment Workgroup
- Klaf, S.
  - Directors of Undergraduate Studies (DUS), Arts and Sciences.
- Mustapha, Z.
  - Ally Working Group
- Ross, C.
  - Senate Education Committee
  - Arts & Sciences Educational Policy and Planning Committee (EEPC)
    - Advisory Group (AG) on Uris Classrooms
    - Subcommittee on Morningside Classroom Renovations
  - Provost's Advisory Committee on the Libraries (PCAL), Education Working Group Subcommittee
  - Arts and Sciences Faculty Meetings (attendee)
  - Steering Committee for Middle States Re-accreditation & Co-chair for Standard 5 Working Group
- Sadeh, S.
  - Canvas Working Group
  - Ally Working Group

External Committees and Boards

- Althouse, I.
  - City University of Hong Kong Teaching Development Grant Review Committee
  - Ivy+ for Grads: Monthly Meeting Co-Convener
- Foo, J. C.
  - 47th Annual POD Network Conference. Workshop-in-a-Box sessions Co-Coordinator
  - City University of Hong Kong Teaching Development Grant Review Committee
- Hentrich, N.
  - Society for Cinema and Media Studies. Critical Media Pedagogies Co-Chair.
  - Equity, Diversity and Inclusion in Teaching Media (EDIT Media). Teaching Committee Member.
- Irvin, A.
  - *College Teaching*, Consulting Editor
  - *The Scholarly Teacher*, Editorial Review Board
  - City University of Hong Kong Teaching Development Grant Review Committee
  - William & Mary Studio for Teaching and Learning Innovation Review
- Kim, J.
  - City University of Hong Kong Teaching Development Grant Review Committee
- Klaf, S.
  - City University of Hong Kong Teaching Development Grant Review Committee
- Phillipson, M.
  - Ivy+ for Grads: Monthly Meeting Co-Convener
  - POD Network: Arts and Humanities Special Interest Group, Founding Co-Chair
- Ross, C.
  - Ivy+ Directors: Monthly Group Meetings
- Schroering, A.
  - POD Network: Earth-Centered Special Interest Group, Incoming Chair

Appendix A:
CTL Leadership and Staff

Leadership Council

Soulaymane Kachani, Chair, Senior Vice Provost	**Catherine Ross**, Executive Director, Center for Teaching and Learning

A. Maurice Matiz, Senior Director, Instructional Technologies	**Amanda Irvin**, Senior Director, Faculty Programs and Services
Mark L. Phillipson, Director, Graduate Student Programs and Services	

Below is a list of staff at the Center for Teaching and Learning.

Assessment and Evaluation

Glen Davenport, Associate Director

Communications and Outreach

Laura Nicholas, Senior Manager

Faculty Programs and Services

Amanda Irvin, Senior Director	**Suzanna Klaf**, Associate Director
Jessica Rowe, Associate Director, Instructional Design	**John C. Foo**, Assistant Director, Science and Engineering
Jamie Kim, Assistant Director	**Rebecca Petitti**, Assistant Director
Aurora Collado, Learning Designer	**Alyssa Famolari**, Learning Designer
Nicole Hentrich, Learning Designer	**Xiaoyan Qin**, Learning Designer
Sam Sadeh, Learning Designer	**Michael Tarnow**, Learning Designer, Science and Engineering

CUIMC Programs and Services

Ashley Kingon, Associate Director	**Corey Ptak**, Assistant Director
Nigel Frazier, Learning Designer	

Graduate Student Programs and Services

Mark L. Phillipson, Director	**Ian Althouse**, Senior Assistant Director
Caitlin DeClercq, Senior Assistant Director	**Abby Schroering**, Assistant Director

Instructional Technologies

A. Maurice Matiz, Senior Director	**Stephanie Ogden**, Associate Director
Danny Chan, Associate Director	**Vincent Aliberto**, Senior Media Producer
Devon Anirudh, Senior Technical Specialist	**Michael Brown**, Assistant Media Producer
Frank DeStefano, Assistant Media Producer	**Natalia Dittren**, Associate Programmer
Jason Guzman, Media Producer	**Jon Hanford**, Media Producer
Meesha Meksin, Project Manager	**Zarina Mustapha**, Senior Front-end Developer
Nik Nyby, Senior Programmer	**Evan Petersen**, Assistant Programmer
Marc A. Raymond, Senior Designer	

Administration

Sarah Carswell, Executive Assistant	**Sayaka Tsuda**, Programs Coordinator

Appendix B:

2022-23 CTL Advisory Board

Soulaymane Kachani, Co-Chair Senior Vice Provost	**Catherine Ross**, Co-Chair Executive Director of the Center for Teaching and Learning
Carlos Alonso Dean, Graduate School of Arts and Sciences; Morris A. & Alma Schapiro Professor in The Humanities, Vice President for Graduate Education, Faculty of Arts and Sciences	**Jonathan Amiel** Professor of Psychiatry; Senior Associate Dean for Innovation, College of Physicians and Surgeons
Sarah Cole Parr Professor of English and Comparative Literature; Interim Dean, School of the Arts	**Valeria Contreras** Graduate Student, School of the Arts
Pat Grieve Nancy and Jeffrey Marcus Professor of the Humanities, Department of Latin American and Iberian Cultures, Faculty of Arts and Sciences	**Julia Hirschberg** Percy K. and Vida L. W. Hudson Professor of Computer Science, Fu Foundation School of Engineering and Applied Science
Lisa Hollibaugh Dean of Academic Affairs, Columbia College	**Kris Kavanaugh** Associate Vice President, Columbia University Libraries
Julie Kornfeld Vice Provost for Academic Programs; Associate Professor of Epidemiology, Columbia University Irving Medical Center	**Ellen Meier** Professor of Practice, Teachers College; Executive Director of the Center for Technology and School Change
Janet Metcalfe Professor of Psychology, Department of Psychology, Faculty of Arts and Sciences	**Dennis Mitchell** Interim Provost; Executive Vice President for University Life; Senior Vice Provost for Faculty Advancement; Professor of Dental Medicine (Community Health and Periodontics)
Barclay Morrison Professor of Biomedical Engineering; Vice Dean of Undergraduate Programs, Fu Foundation School of Engineering and Applied Science	**Letty Moss-Salentijn** Edward V. Zegarelli Professor of Dental Medicine (in Anatomy and Cell Biology); Vice Dean for Curricular Innovation and Interprofessional Education in the College of Dental Medicine
Justin Pearlman Vice Provost for Communications and Engagement, Office of the Provost	**Brent Stockwell** Professor of Biological Sciences and Chemistry, Department of Biological Sciences, Faculty of Arts and Sciences
Ann Thornton Vice Provost and University Librarian, Columbia University Libraries	**Elías Tzoc-Pacheco** Undergraduate Student, Fu Foundation School of Engineering and Applied Science
Miguel Urquiola Professor of Economics and of International and Public Affairs; Dean of Social Sciences in the Faculty of Arts & Sciences	**Greg Wawro** Professor of Political Science, Department of Political Science, School of Arts and Sciences

Appendix C:

Data Summary of AY 2022-23 Programs and Services

1. Unique Individuals Served by the CTL

By University Status/Affiliation

Graduate students	1,294
Faculty	1,548
Administrators and university staff	401
Postdocs	78
Research scientists	51
Undergraduate students	40
Alumni / Retirees	2
Total	3,414

By School

Arts and Sciences	1,386
Fu Foundation School of Engineering and Applied Science	365
Vagelos College of Physicians and Surgeons	318
Mailman School of Public Health	226
College of Dental Medicine	30
School of Nursing	105
Columbia Business School	88
Columbia Law School	106
Graduate School of Journalism	48
School of Architecture, Planning and Preservation	46
School of International and Public Affairs	166
School of Social Work	153
Columbia Climate School	4
Teachers College	82
Barnard College	78
Jewish Theological Seminary	2
Union Theological Seminary	3

Centers and institutes	103
Other units	101
Total Columbia-affiliated individuals	3,414

Total external visitors	44
Total unique individuals served	3,458

2. CTL Interactions

By University Status/Affiliation

Faculty	4,191
Graduate students	4,964
Administrators and university staff	1,128
Postdocs	161
Research scientists	75
Undergraduate students	113
Alumni / Retirees	3
Total	10,635

By School

Arts and Sciences	4,969
Fu Foundation School of Engineering and Applied Science	1,129
Vagelos College of Physicians and Surgeons	1,151
Mailman School of Public Health	454
College of Dental Medicine	69
School of Nursing	448
Columbia Business School	221
Columbia Law School	174
Graduate School of Journalism	126
School of Architecture, Planning and Preservation	152
School of International and Public Affairs	324
School of Social Work	472
Columbia Climate School	4
Teachers College	199
Barnard College	189
Jewish Theological Seminary	2
Union Theological Seminary	10

Centers and institutes	230
Other units	312
Total Columbia-affiliated interactions	10,635

Total external visitor interactions	58
Total interactions	10,693

3. Programs and Events

Client Interactions By Program Type

Workshops	2,572
University-wide events	754
Self-paced courses	1,327
Institutes	184
Outreach events	391
Total program and event interactions	5,228

4. Services

Client Interactions By Service Type

Project consultations	1,420
Teaching and course consultations	668
CourseWorks consultations	431
Professional development consultations	881
Other technology support	299
Total service interactions	3,699

Center for Teaching and Learning

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