

Annual Report

Center for Teaching and Learning
Office of the Provost

2023-2024

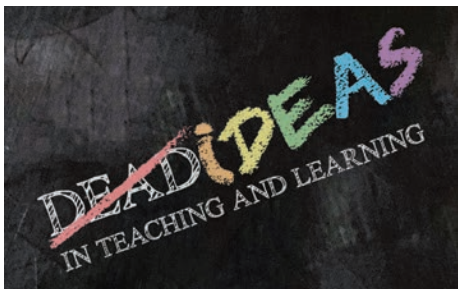


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Our Mission

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 Provost



Angela V. Olinto
Provost

Dear Colleagues:

I am happy to share the ninth annual report of the Columbia University Center for Teaching and Learning (CTL). In my first few months as Provost, I have been proud to learn about the CTL's extensive work in advancing excellence and innovation in teaching and learning at Columbia.

In this report, you will find many accounts from faculty and graduate student instructors across the University who have collaborated with the CTL, both to better support their students' learning and for their own professional development. You will also find examples of the CTL's dedication to advancing inclusive teaching and mentorship at Columbia. For example, the CTL launched a new online course for instructors, "Building Effective Mentoring Relationships," that provides faculty with a framework for being more effective mentors and improving student learning.

This year, the CTL has served as a crucial source of support and guidance for our faculty. The center and its staff have been a constant resource as events beyond the classroom affected our learning environments. The CTL shared resources on adopting pedagogies of care and teaching in different modalities and provided conversation spaces for faculty to share their experiences and find community. The center also partnered with the Office of the Vice Provost for Faculty Advancement and two Provost's Senior Faculty Teaching Scholars to offer workshops on employing empathetic objectivity in the classroom and utilizing AI training for facilitating challenging classroom conversations. These efforts are part of the Office of the Provost's Dialogue Across Difference initiative, which aims to enhance our faculty's ability to manage differing viewpoints on sensitive subjects in the classroom.

If you have yet to engage with the CTL, I invite you to join a growing community of educators dedicated to pushing the frontiers of teaching in higher education.

I look forward to joining you in this work.

All the best wishes,

Angela V. Olinto
Provost
Professor of Astronomy and of Physics

Letter from the Senior Vice Provost



Soulaymane Kachani
Senior Vice Provost

Dear Colleagues:

In this report, you will see the many ways that the Center for Teaching and Learning (CTL) has furthered its mission to promote inclusive and learner-centered pedagogy, and the purposeful use of emerging technologies in teaching, while also remaining adaptive and responsive to the needs of Columbia's instructors.

In the past year, the CTL fully embraced the onset of generative AI in teaching, offering resources and programming to provide guidance for Columbia instructors engaging with these tools in their courses. In response to an ever-changing campus climate, the CTL developed customized workshops to support faculty teaching through times of stress, and remained available for faculty through office hours five days a week.

The CTL also supported Columbia instructors through the Office of the Provost's Teaching and Learning Grants program, working with them to integrate exciting new educational methods into their courses to improve the student learning experience. We have been thrilled to fund 340 faculty projects since the program's inception in 2014. You can read more about the excellent work of the grant awardees in this report.

Amidst all of this important work, the CTL has undergone a transition in leadership. I am delighted to congratulate and welcome Amanda Irvin to her new role as the next Executive Director of the CTL, beginning July 1, 2024. I want to give my deepest thanks to Catherine Ross for her wonderful seven-year tenure as Executive Director, and a remarkable 30-year career in higher education, as she begins her retirement. Catherine's work will have a lasting influence on the CTL and our teaching community.

I hope you find inspiration in this report through the many stories of instructors working to improve teaching throughout Columbia. I have been delighted to watch the growing reach and impact of the CTL throughout our campuses and beyond, and I know there is much more to come.

Sincerely,

Soulaymane Kachani
Senior Vice Provost

Letters from the Outgoing and Incoming CTL Executive Director —



Catherine Ross
(Outgoing) Executive Director
of the Center for Teaching
and Learning

Dear Colleagues:

It is with both sadness and excitement that I write this—my final annual report letter, before I begin my retirement in July 2024.

I am excited to once again share the amazing work of my CTL colleagues, and I am very happy to be able to thank all of you who are highlighted herein—faculty, graduate students, and fellow administrators—for collaborating with us, bringing your projects and ideas to us, and creating a powerful community around teaching and learning at Columbia.

I am sad to be leaving Columbia and the CTL, though I have to say the prospect of retirement is enticing! But I will miss this community, and the passion for teaching which binds us. I take great comfort in knowing that teaching at Columbia is well supported and that this work will continue long after I am gone thanks to our fantastic CTL teams and to those of you who are always striving to enhance the learning of your students.

I am deeply grateful to have had this opportunity to serve at Columbia, and I wish you all much success and joy in your teaching in the years ahead!

Warm regards,

Catherine Ross



Amanda Irvin
(Incoming) Executive Director
of the Center for Teaching
and Learning

Dear Colleagues:

I am thrilled to be serving as the next Executive Director of the CTL, and to have the opportunity to continue the center's outstanding work in advancing teaching and learning at Columbia.

As a member of the CTL's Faculty Programs and Services team since 2016, it has been a privilege to work with faculty across the University on their fascinating and innovative teaching projects. I now look forward to working with the entire Columbia teaching community at a higher level, including with our graduate student instructors, staff, and our partner offices.

I have been proud to be involved in the CTL's work of supporting faculty teaching through change, and centering learning as the world changes around us. The work of a Center for Teaching and Learning is never complete, and I'm honored to be able to carry on this work.

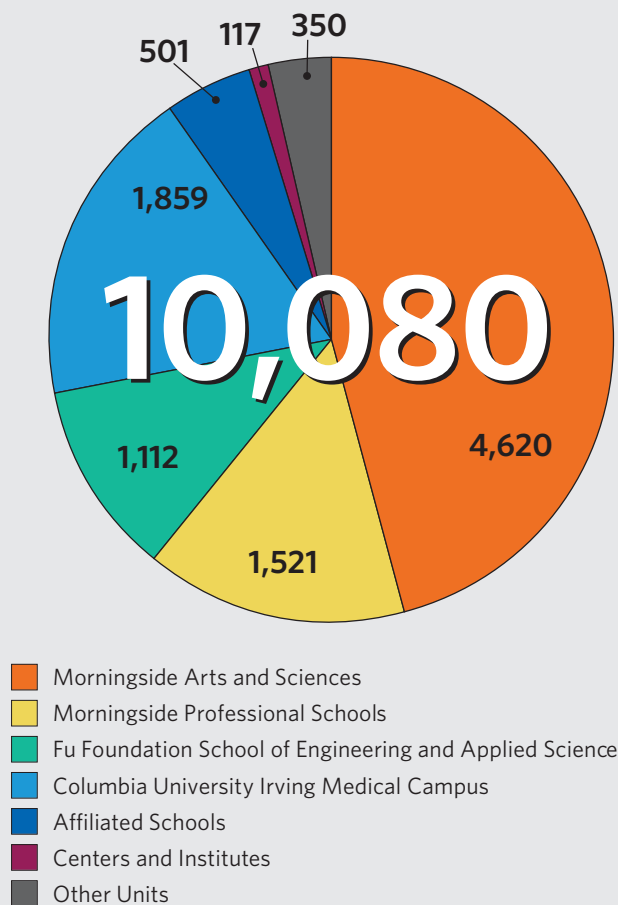
I want to thank the Office of the Provost for this opportunity, and to thank Catherine Ross for her guidance and leadership over the past seven years; I know I have some big, stylish shoes to fill! I can't wait to get started.

Sincerely,

Amanda Irvin

Annual Highlights

Interactions with Columbia-Affiliated Individuals



Service to Columbia University

3,058 consultations and service interactions with Columbia-affiliated individuals

1,018 Columbia-affiliated individuals in on-demand courses

84 graduate student fellows and teaching consultants

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

Service to Columbia University and Beyond

529,191 minutes watched on ColumbiaLearn YouTube Channel

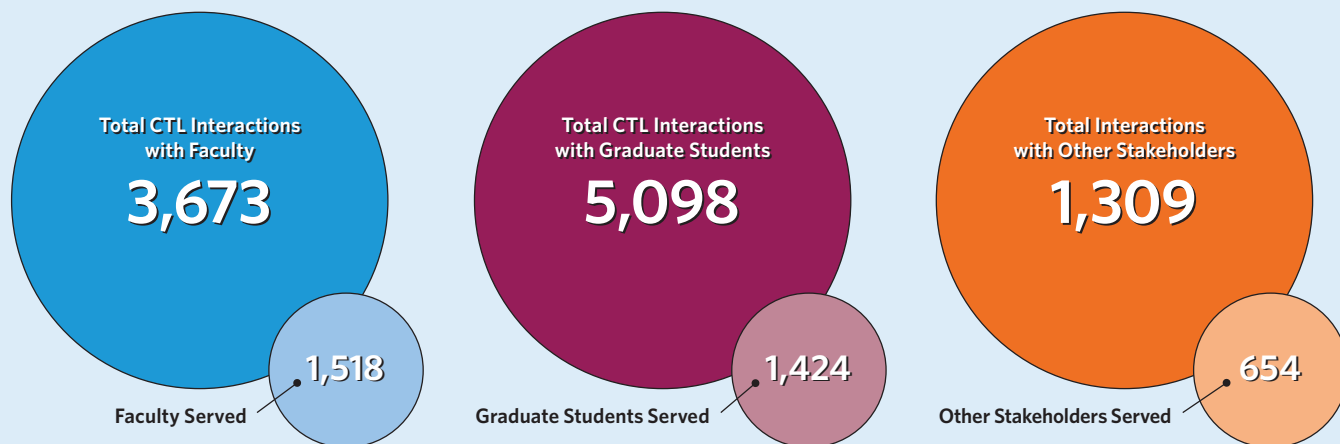
25 CTL-produced MOOCs active on edX

112,948 learners enrolled in CTL-produced MOOCs that were active during the year

49 interactions with external visitors

61 CTL-developed software applications with 586,559 users and 2.5 million page views

Engaging with Stakeholders



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 celebrate ten years of teaching innovation by faculty who have transformed their courses and pedagogies through the Office of the Provost's Teaching and Learning Grants.

On February 13, a faculty panel and celebratory reception was held in Low Library. The panel, "**Celebrating 10 Years of Provost-Funded Teaching Innovations at Columbia**," was moderated by CTL Executive Director Catherine Ross and featured four faculty members: Laurel Abbruzzese, Associate Professor of Rehabilitation and Regenerative Medicine; Jay Sethuraman, Professor of Industrial Engineering and Operations Research; Brent Stockwell, William R. Kenan Jr. Professor of Biological Sciences and Professor of Chemistry and of Pathology and Cell Biology; and Susan Witte, Professor of Social Work. This panel of faculty grant recipients reflected back on the arc of their journeys as innovators and discussed how their practices have evolved since receiving a Provost's grant. After the panel, Senior Vice Provost Soulaymane Kachani gave remarks to recognize grant recipients since 2014 and to celebrate teaching and learning at Columbia.

On February 1 and February 7, two online panels were held:

- **Generative AI and the Science of Learning** with Science of Learning Research Initiative (SOLER) Seed Grant recipients Victoria Malaney-Brown, Director for Academic Integrity; Kathleen McKeown, Henry and Gertrude Rothschild Professor of Computer Science; and Christopher Munsell, Glascock Associate Professor of Professional Practice of Real Estate Development and Finance. Moderated by Adam Brown, SOLER Program Director.



Faculty speak with CTL Executive Director Catherine Ross in the panel "Celebrating 10 Years of Provost-Funded Teaching Innovations at Columbia" at the Symposium.

- **Faculty Innovations through Provost's Teaching and Learning Grants:** A Panel Conversation with Ashli Carter, Lecturer in the Discipline of Management; Rachel Cummings, Associate Professor of Industrial Engineering and Operations Research; and Joseph Howley, Associate Professor of Classics. Moderated by Amanda Irvin, CTL Senior Director of Faculty Programs and Services.

303 participants in the 2024 Symposium.

To watch recordings of the event:
<https://ctl.columbia.edu/about/2024-symposium/>



Senior Vice Provost Soulaymane Kachani gives remarks to recognize grant recipients since 2014.



Faculty and staff mingle at the Symposium

Advancing Mentorship Practices

The Advancing Mentorship Practices initiative, hosted by the Office of the Provost in partnership with the Center for Teaching and Learning, is intended to provide faculty with the support they need to be effective mentors of graduate students and postdocs. In the second year of this initiative, the CTL offered the programs below with the aim of cultivating effective, efficient, and inclusive mentoring practices at Columbia.

New Self-Paced Course: Building Effective Mentoring Relationships

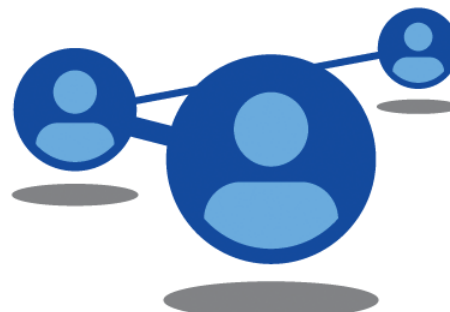
The CTL launched a self-paced course, *Building Effective Mentoring Relationships*, that provides faculty with a framework for creating effective mentoring relationships that are focused on learning. The course, for faculty and research officer mentors of graduate students and postdocs at Columbia, is organized around four modules that draw on the mentoring cycle from Lois Zachary and Lisa Fain's *The Mentor's Guide: Facilitating Effective Learning Relationships* (2022). The course includes the following modules: "Preparing to Mentor," "Co-Constructing a Mentoring Plan," "Enabling Growth through Feedback," and "Reviewing Your Mentoring Relationship."

Entering Mentoring Workshops for Faculty

In Fall 2023 and Spring 2024, the CTL offered the following "Entering Mentoring" workshops for faculty, led by CTL facilitators trained by the Center for the Improvement of Mentored Research Experiences (CIMER).

- **Fostering Independence:** Participants explored how to define independence, identify its core elements, track how those elements change over the course of a mentoring relationship, and employ various strategies that build mentee confidence, establish trust, and foster independence. (November 10, 2023)
- **Addressing Equity and Inclusion:** Participants examined how they could unlock the benefits of a culturally diverse research group using inclusive practices, and they reflected on how the policies, expectations, and behaviors in their labs can promote an inclusive culture. (November 2, 2023)

- **Aligning Expectations:** Participants explored how to effectively establish and align mentee and mentor expectations within the mentoring relationship, and they considered how personal, professional, and disciplinary differences may influence expectations. (February 9, 2024)
- **Maintaining Effective Communication:** Through facilitated discussions and case studies, participants collectively identified characteristics of effective communication, discussed how to communicate with mentees from diverse backgrounds, and explored practices for maintaining productive communication in mentoring relationships. (March 19, 2024)
- **Assessing Understanding:** Participants explored how to assess their mentees' understanding of core concepts and processes of one's discipline, including possible reasons for a lack of understanding, and how to use multiple strategies to enhance mentee understanding. (April 4, 2024)



ADVANCING MENTORSHIP PRACTICES

“The events and activities organized by the CTL over the past couple of years have been extremely informative and enriching. The in-person and virtual programs, ranging from seminars, small group book readings over lunch, and workshops have not only informed me about recent advances in pedagogical methods and metacognitive aspects of learning but have also provided tools for effective mentoring. A special shout out to John Foo and Corey Ptak for moderating the Entering Mentoring sessions. These guided, interactive forums were fun and provided useful strategies for enhancing mentor-mentee relationships while fostering equity and inclusion. An added bonus was meeting and sharing experiences with other participants engaged in diverse fields of study and practice and at different career stages.”

— **Govind Bhagat**

Professor of Pathology and Cell Biology

Making the Most of Mentorship for Graduate Students

In this session, sponsored by the Office of the Provost in partnership with the Center for Teaching and Learning and held for postdocs and graduate students, participants learned concrete strategies for identifying and addressing common mentorship challenges. An interdisciplinary panel of mentor-mentee pairs shared their tips and tricks for entering mentoring. Participants then moved to 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. Pertinent guidance and models were offered for current and future mentees and those planning to take on the role of an academic mentor during their careers. This session was a collaboration between the CTL, the Office of Postdoctoral Affairs, and Office of Research Compliance and Training. (November 2, 2023)

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



Faculty and graduate students converse at the “Making the Most of Mentorship” event.

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

The Center for Teaching and Learning offered a range of resources, workshops, and discussions to support Columbia instructors in navigating and incorporating generative AI tools into teaching and learning.

Teaching Lab for Generative AI Tools for Faculty

The CTL hosted a series of labs where faculty explored generative AI tools and their potential applications in the classroom. The labs aimed to serve as a supportive space to explore the ways generative AI tools can be used to enhance teaching and learning.

- **Designing Effective Prompts:** Instructors gained experience crafting effective prompts for AI and explored various strategies for incorporating prompt engineering into their classes. (October 26, 2023 and February 20, 2024)
- **Community Building:** Instructors explored practical strategies for using AI tools to cultivate a sense of belonging, foster interaction, and stimulate intellectual curiosity amongst their students. (November 14, 2023 and February 20, 2024)

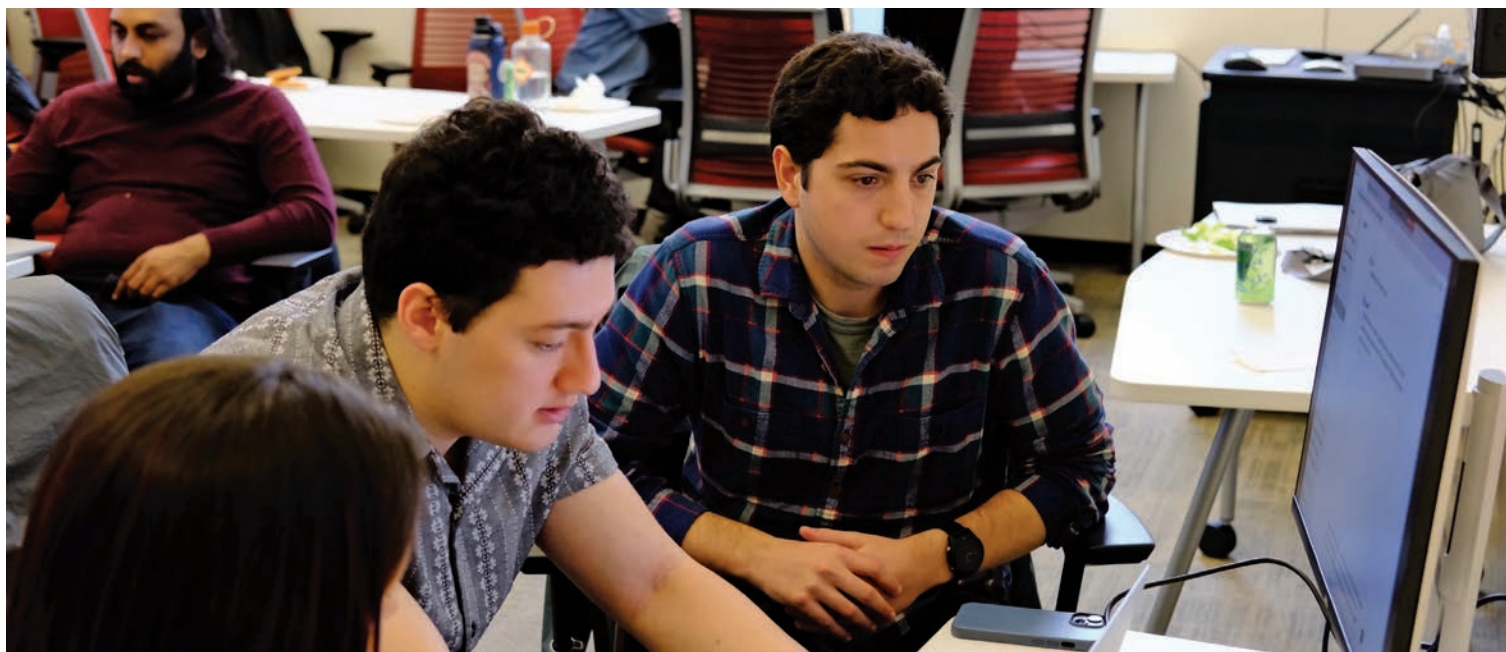
- **Active Learning with AI:** Instructors explored the intersection of AI tools and active learning through a hands-on activity, and they worked in small groups to test out sample AI prompts and discuss the potential applications of AI for promoting active learning in the classroom. (March 27, 2024)

Transparent Assignment and Rubric Design in the Age of AI for Faculty

AI and its use in assignments has exposed a critical need for instructors to make their assignment expectations completely transparent to students. This three-hour session offered a framework for transparent design to ensure that students know the purpose, the task, and the criteria for success on an assignment. Faculty brought their own assignment idea and applied the transparent design framework to their assignment, engaged in peer review, created a rubric for their assignment, and planned for implementation. (December 12, 2023)



Faculty work with CTL Associate Director **Suzanna Klaf** and Assistant Director **Rebecca Petitti** in the workshop “Transparent Assignment and Rubric Design in the Age of AI.”



Graduate students experiment with using AI in Teachers' Lounge.

Teaching with AI: Teachers' Lounges for Graduate Students

Teachers' Lounge is a series of informal discussions about teaching practices and the culture of learning at Columbia. In 2024, Teachers' Lounge sessions focused on leveraging AI in teaching.

- **Exploring Tools:** This session was devoted to tinkering with a set of tools powered by AI—both text- and image-based. Participants explored these tools at stations in small groups, brainstorming ways they could motivate curiosity and learning in their respective disciplines. (October 12, 2023)

"The most rewarding aspect of participating in 'Teaching Lab for AI Tools: Community Building' has been the hands-on experience with AI tools for classroom use. Through collaboration and reflection, I've been able to enhance my teaching approach and design more effective lesson plans that integrate technology seamlessly. The CTL has significantly improved my teaching methods. They not only offer resources and workshops, but also foster engaging conversations that inspire innovative approaches to student engagement."

— **Dolores Barbazán Capeáns**

Lecturer in Spanish in the Department of Latin American and Iberian Cultures

- **Notes from the Frontline:** Participants heard from peer instructors who have proactively tried out AI tools in some form with students, and they collectively considered aspects of incorporating these tools into assignments, including privacy, attribution, and metacognitive growth. (November 9, 2023)
- **Prompt Realizations:** Participants experimented with various AI prompt strategies that can drive learning activities as well as just-in-time feedback and assessments. (March 6, 2024)
- **Developing Critical AI Literacy:** Similar to critical frameworks developed around information and digital literacy, this discussion gave instructors tools to approach AI with both practical and ethical considerations in mind. Participants provisionally defined critical generative AI literacy and brainstormed discipline-specific considerations and concrete next steps to support students' intentional use of generative AI. (April 17, 2024)

The CTL also created the online resources "Teaching and Learning in the Age of AI: Considerations, Resources, and Opportunities" and "Incorporating Generative AI in Teaching and Learning: Faculty Examples Across Disciplines." Read more about these resources on page 39.

Teaching in Times of Stress and Challenge

Learning spaces act as microcosms of the larger “outside” world. In times of stress, it can be challenging to navigate these spaces, as an emotionally distressing event beyond the classroom can manifest itself in a classroom in ways that can impede mental, emotional, and cognitive functioning of students, and affect learning. The CTL offered resources and workshops to support Columbia instructors teaching during times of stress and to help instructors and their students navigate challenges.

The CTL provided multiple sessions of the following workshops:

Teaching in Times of Stress and Challenge: A Conversation for Faculty Faculty joined colleagues to discuss the ways they support their students and themselves while teaching during times of stress. This was an informal space for participants to share their thoughts and experiences and find community with peers. The CTL facilitated conversations and shared resources. (Fall 2023 and Spring 2024)

Easing into a New Semester of Teaching: A Conversational Space for Faculty At the start of the Spring 2024 semester, faculty joined colleagues to discuss the ways they support their students and themselves throughout the semester. The aim was to reflect back on lessons learned and plan ahead for the Spring 2024 semester. The CTL facilitated the conversation and shared resources. (Spring 2024)

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 2023 and Spring 2024)

The CTL also updated the online resources “Teaching in Times of Stress and Challenge” and “Navigating HOT Moments: Before, During and After Class.” Read more about these resources on page 39.

Dialogue Across Difference

Dialogue Across Difference (DxD), hosted by the Office of the Provost as part of the University’s Values in Action initiative, was designed to foster a resilient and inclusive community of learners among students, faculty, and staff and to engage with diverse

perspectives and navigate challenging conversations with a shared commitment to mutual understanding and respect.

The Office of the Vice Provost for Faculty Advancement and the Center for Teaching and Learning partnered with Provost’s Senior Faculty Teaching Scholars Ari Goldman and Paul Ingram (see section below) to host two professional development workshops, listed below, dedicated to enhancing faculty skills for managing differing viewpoints on sensitive subjects, especially during times of crisis.

Employing Empathetic Objectivity in the Classroom Professors Ari Goldman and Gregory Khalil, who co-teach a course on religion in Israel/Palestine at the Graduate School of Journalism, shared how they navigate differences in and out of the classroom. (February 22, 2024)

AI Training for Facilitating Challenging Classroom Conversations Professors Paul Ingram and Hitendra Wadhwa of Columbia Business School led a workshop on techniques for navigating complex classroom conversations, and they introduced a custom-built AI-based coaching tool for deploying the techniques. (March 6, 2024)



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 2023–24 Provost's Senior Faculty Teaching Scholars were as follows:

- **Peter Bearman**, *Sociology, Arts and Sciences*
- **Denise Cruz**, *English and Comparative Literature, Arts and Sciences*
- **Lila Davachi**, *Psychology, Arts and Sciences*
- **Karol DiBello**, *School of Nursing, Columbia University Irving Medical Center*
- **Philip Genty**, *Law School*
- **Ari Goldman**, *Journalism School*
- **Paul Ingram**, *Business School*
- **Garud Iyengar**, *Industrial Engineering and Operations Research, Fu Foundation School of Engineering and Applied Science*
- **Monica Lypson**, *General Medicine, Columbia University Irving Medical Center*

Below is a highlighted project by Provost's Senior Faculty Teaching Scholar Monica Lypson.

Professor Lypson worked collaboratively with the Columbia University Irving Medical Center (CUIMC) Office of Faculty Professional Development, Diversity and Inclusion and the CTL to conceptualize the CUIMC Educator Development program, which will be an evidence-based, faculty driven professional development workshop series for clinician-educators based at Vagelos College of Physicians and Surgeons. Open to the CUIMC teaching community, the series aims to develop a shared understanding of what it means to be an educator at CUIMC and provide a common fund of knowledge for all clinician-educators at CUIMC. The program will serve as an additional opportunity for professional development for educators. The goal is to highlight the expertise of staff and faculty associated with CUIMC, working with the CTL to maximize this programming's benefit.



Dead Ideas in Teaching and Learning Podcast

This year, the CTL released seasons 7 and 8 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.

Seasons 7 and 8 focused on systemic issues in teaching and learning in higher education. Guests included Columbia faculty, students, and staff, as well as notable external authors and experts.



Catherine Ross and Amanda Irvin record the final episode of season 8 of *Dead Ideas*.

Season 7, Fall 2023

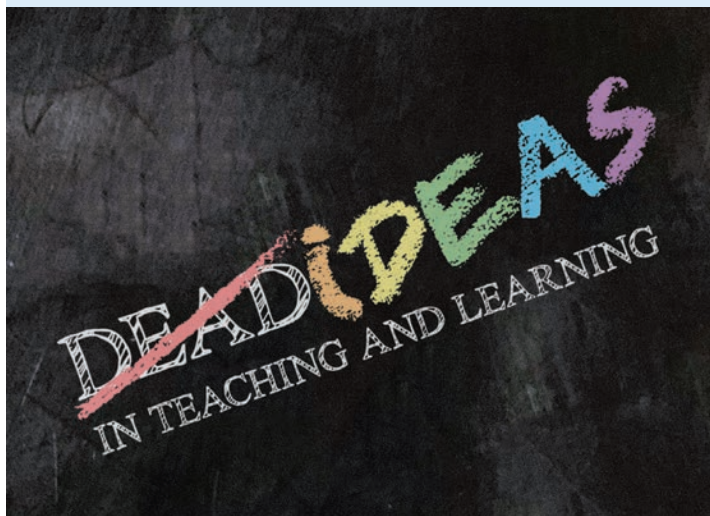
- **"Dead Ideas about the Role of Centers for Teaching and Learning and Institutional Change"** with Mary Wright, Associate Provost for Teaching and Learning at Brown University and author of *Centers for Teaching and Learning: The New Landscape of Higher Education* (2023)
- **"AI as a Mass Extinction Event for Dead Ideas in Teaching and Learning?"** with Cynthia Alby, Professor of Education at Georgia College and author of *Learning That Matters: A Field Guide to Course Design for Transformative Education* (2020)
- **"From Devaluing to Valuing Teaching: Changes Institutions Can Make"** with Michelle Miller, Professor of Psychological Sciences and President's Distinguished Teaching Fellow at Northern Arizona University
- **"What's Needed for Institution-Wide Improvements in Undergraduate Science Teaching?"** with Marielena DeSanctis, President of the Community College of Denver, and Cassandra Volpe Horii, Associate Vice Provost for Education and Director of the Center for Teaching and Learning at Stanford University
- **"Ready to Find Out What Research Tells Us about Grading and Grade Inflation? Buckle Up!"** with Josh Eyler, Director of the Center for Excellence in Teaching and Learning at the University of Mississippi
- **"Let's Stop Relying on Biased Teaching Evaluations"** with Joanna Wolfe, Teaching Professor of English and Affiliated Faculty of Mechanical Engineering at Carnegie Mellon University

Season 8, Spring 2024

- **"Teaching Development in Doctoral Education: Where, When, and How?"** with Benjamin Rifkin, Professor of Russian and Interim Provost at Fairleigh Dickinson University; Rebecca Natow, Assistant Professor of Educational Leadership and Policy and Director of the Higher Education Leadership and Policy Studies program at Hofstra University; Nicholas Salter, Associate Professor of Industrial-Organizational Psychology at Hofstra University; and Shayla Shorter, Clinical Collaborative Librarian and Assistant Curator for the Medical Library at NYU Grossman School of Medicine
- **"Teaching Development in Doctoral Education: Let's Ask the Grad Students!"** with co-host Caitlin DeClercq, Senior Assistant Director of Graduate Student Programs and Services at the Columbia CTL, joined by Columbia doctoral students Anirbaan Banerjee, Sara Jane Samuel, and Anwesha Sengupta
- **"Why is There No Training on How to Teach Graduate Students?"** with Leonard Cassuto, Professor of English at Fordham University
- **"Notes from the Field: Dead Ideas from Columbia CTL Educational Developers"** with Columbia Center for Teaching and Learning staff John Foo, Jamie Kim, Rebecca Petitti, and Corey Ptak
- **"How to Help Adjuncts Not Want to Give Up"** with Kerry O'Grady, Director for Teaching Excellence at the Samberg Institute for Teaching Excellence at Columbia Business School
- **"Passing the Baton: A New Chapter for Dead Ideas"** with Amanda Irvin, Senior Director of Faculty Programs and Services at the Columbia CTL

To learn more and listen to the podcast:

<https://ctl.columbia.edu/podcast/>



21,129 podcast downloads for Seasons 7 and 8.

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 teaching assistants (TAs) for their contributions. In the 2023–24 academic year, students across Columbia’s departments and campuses submitted over 900 thank-you notes, which were forwarded to professors and TAs.

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

To: Stephen Biddle

“Thank you, Prof. Biddle, for generously sharing your time in office hours and our post-class discussions. Your class has been a landmark in my academic journey, enriched by your scholarship and infectious passion for teaching. I respect your integrity and deep appreciation for the weight of policy-making, which you instill in your students. You don’t just teach; you empower us to stride confidently into the world, equipped to effect meaningful change. Thank you for being not just a professor, but a mentor.”

From: Rasmus Edelmann

*Foundations of International Security Policy,
Fall 2023*

Thank-a-Prof Thank-a-TA

Thank you.

To: Nicholas Santiago

"Thank you so much for making this course engaging and comfortable for me. I really enjoyed your classes and I appreciate the effort that went to keeping the information interesting. All the websites and sources shared are still fun to learn from and I shared it with my friends, who enjoyed them too! I'm especially grateful for the ask-a-neuroscientist panel which broadened my mind towards all the careers possible and I'm also much more comfortable with the idea of exploring my interest as I go. Please thank the people on the panel for their advice and guidance, it was comforting to hear their experience. Lastly, I loved doing the assignments since they were engaging and I enjoyed exploring my interests through selecting topics for my presentations—so I appreciate the creativity in the assignments given. I'm looking forward to learning more about the field of neuroscience."

From: Prajna Arun
Introduction to Neuroscience, Spring 2024

To: Tuongvi Luong

"Thank you for being the most amazing TA ever year. Coming into Columbia School of Social Work, and especially into Micro and Macro Economics, I was worried that I wouldn't be able to keep up. Your labs helped me understand the material so much better and created a space where I felt comfortable and safe to participate and share my thoughts, even if I was not confident that I had the right answer. The energy that you bring to lab is so appreciated, and we can tell that you put so much effort into making sure that we are good and feel alright with the material that we are learning. You have also been such an awesome advocate for us to both professors during the year and I'm sure helped us in ways that we don't even know about. Thank you so much!"

From: Anonymous Student
*Macroeconomics, Fall 2023; and
Policy Analysis II Lab, Spring 2024*

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 24). 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 2023–24 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), 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 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. SOLER has continued to expand the PSSG program, having funded 20 distinct projects led by faculty from across the University to date, including six new projects committed in 2024. Multiple projects have been conducted in collaboration with the CTL and others with the Columbia University Information Technology (CUIT) Emerging Technologies Consortium.

SOLER achieved or participated in seven major developments in the 2023–24 academic year:

1. Expanding 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, ten students have served on the team.
2. Holding the second annual SOLER Summer Institute in July 2023, 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, open discussion, and a guest speaker for the keynote address: Regan Gurung, Associate Vice Provost and Executive Director for the Center for Teaching and Learning and Professor of Psychological Science at Oregon State University.
3. Hiring a GSAS Fellow in Academic Administration student, who joined the team in Spring 2024 with a focus on enhancing the SOLER website.
4. Playing a leading role in the evolution of an Ivy+ working group for discussion of strategic and organizational topics related to the Science of Learning. Sessions convened throughout the academic year featured staff engaged in SoTL research and related activities from seven peer institutions: Harvard University, Brown University, The University of Pennsylvania, Stanford University, Johns Hopkins University, Massachusetts Institute of Technology, and The University of Chicago.
5. Continuing a monthly journal club series attended by the extended SOLER community. The group discusses primary research articles as well as essays about fundamental and timely issues in the Science of Learning and University administration.
6. Moderating a panel for the Spring 2024 Celebration of Teaching and Learning Symposium. See page 10 for details.
7. Hosting the Spring 2024 information session for the PSSG program's latest application cycle. Two previous PSSG faculty awardees—Lecturers Ashli Carter (Columbia Business School) and Bradley Pitcher



Jeff Rubenstein speaks at the Provost's Conversation on Online Learning event, moderated by CTL Senior Director Amanda Irvin.

(Earth and Environmental Sciences)—shared their insights and presented their projects. Notably, the 2024 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 academic year, PCoOL hosted the following talk:

Thinking About the Value of AI in Higher Education: A Conversation with Jeff Rubenstein, Education Cloud Product Manager at Google

On March 14, Jeff Rubenstein, Education Cloud Product Manager at Google, joined us to discuss the ways in which AI can transform and bring value to education. The talk was moderated by CTL Senior Director Amanda Irvin.

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 63 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 2023 AWARDEES

Below is the list of projects launched during the 2023-24 academic year with CTL support.

Heidi Allen, Associate Professor, School of Social Work

Brooke Stott, Lecturer in the School of Social Work

Amy Werman, Lecturer in the School of Social Work

PROJECT: "MDMA-Assisted Therapy Simulation Videos"

Michela Biasutti, Lamont Research Professor,
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 in the Discipline of Economics

PROJECT: "An Online Platform for Econometrics: Visual Graphical Interactive Simulations"

Shivani Ghoshal, Assistant Professor of Neurology,
Columbia University Irving Medical Center

Rini Banerjee Ratan, Berkowitz Family Professor of
Women's Health, Obstetrics and Gynecology,
Columbia University Irving Medical Center

Michelle Bell, Assistant Professor of Neurology,
Columbia University Irving Medical Center

PROJECT: "The Professional Pivot Pilot Study:
A Simulation-Enhanced Curriculum to Improve Medical
Student Communication Frameworks in Hierarchical Bias"

Thomas Groll, Senior Lecturer in the Discipline of
International and Public Affairs

PROJECT: "EconPractice for Microeconomics"

Joseph Howley, Associate Professor of Classics

PROJECT: "Aristotle and AI: Thinking Tools from
Antiquity to Today"

Catherine McManus, Assistant Professor of Surgery,
Columbia University Irving Medical Center

Sophie Mayeux, Postdoctoral Residency Fellow, Surgery,
Columbia University Irving Medical Center

PROJECT: "Using Virtual Reality to Improve Medical
Students' Preparedness for the Operating Room"

Danielle Struble-Fitzsimmons, Assistant Professor of
Rehabilitation and Regenerative Medicine (Physical Therapy),
Columbia University Irving Medical Center

PROJECT: "Incorporating Simulation and Case-Based
Learning Strategies to Improve DPT
Integumentary Education"

Gregory J. Wawro, Professor of Political Science

PROJECT: "Data Science for Political Analytics"

SPRING 2024 AWARDEES

Below is the list of funded projects that will be developed and released in the 2024-25 academic year with CTL support.

Heidi Allen, Associate Professor of Social Work

Brooke Stott, Program Manager, Psychedelic Therapy
Program, School of Social Work

Amy Werman, Lecturer in the School of Social Work

PROJECT: "Psychedelic-Assisted Therapy Clinical Videos"

Benjamin Breyer, Lecturer in the Department of Writing, Barnard College

PROJECT: "Hypermedia Website Hosting Adaptive AI-Guided Learning Exercises and Graphic Visualizations of Writing Concepts in First Year Writing at Barnard"

Heather Butts, Associate Professor of Health Policy and Management, Columbia University Irving Medical Center

Leah Hooper, Assistant Dean, Teaching and Learning, Columbia University Irving Medical Center

Roxanne Russell, Adjunct Assistant Professor of Health Policy and Management, Assistant Dean of Digital Learning, Mailman School of Public Health

Troy Hoffman, Director of Educational Initiatives, Columbia University Irving Medical Center

PROJECT: "Personal Leadership Redesign and Community Spotlight"

Zoë Crossland, Professor of Anthropology

PROJECT: "Collaborative Learning Through Map-making"

Seth Cluett, Lecturer in the Department of Music

PROJECT: "Applied and Critical Approaches to Artificial Intelligence in Media Studies and Creative Technologies"

Sarah DeMoya, Lecturer in the Department of Psychology

Melinda Miller, Senior Director, Institute Programs and Outreach, Mortimer B. Zuckerman Mind Brain Behavior Institute

Daphna Shohamy, Kavli Professor of Brain Science, Psychology; Director and Chief Executive Officer, Mortimer B. Zuckerman Mind Brain Behavior Institute

Alfredo Spagna, Lecturer in the Department of Psychology

PROJECT: "Building Bridges in Neuroscience: Hands-On Experience to Enhance Student Engagement, Learning, and Research Preparedness"

Richard Jochum, Associate Professor of Art and Education, Teachers College

Chris Moffett, Research Scholar, Teachers College

PROJECT: "Experiments in Content: AI-Lab for Educators"

Hardeep Johar, Senior Lecturer in the Discipline of Industrial Engineering and Operations Research, Fu Foundation School of Engineering and Applied Science

Shu-Yi Hsu, Senior Instructional Designer, Office of the Provost

PROJECT: "AITA: AI Teaching Assistant in the IEORE4526 Analytics on the Cloud Course"

Ansaf Salleb-Aouissi, Senior Lecturer in the Department of Computer Science

Nakul Verma, Senior Lecturer in the Department of Computer Science

PROJECT: "FOL Learner: An Online Feedback Tool for Practicing First Order Logic"

Alfredo Spagna, Lecturer in the Department of Psychology

PROJECT: "Redesigning a Cognitive Neuroscience Course to Enhance Student Engagement and Evaluation"

Susan Sturm, George M. Jaffin Professor of Law and Social Responsibility

PROJECT: "Access to Justice for People in Prison: Building Multi-Disciplinary Collaborations Grounded in Partnerships with People Directly Affected by Incarceration"

Sinisa Vukelic, Lecturer of Mechanical Engineering, Fu Foundation School of Engineering and Applied Science

James Hone, Wang Fong-Jen Professor of Mechanical Engineering, Fu Foundation School of Engineering and Applied Science

PROJECT: "Introducing a Project to Promote Active Learning in Manufacturing"

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 receive in-kind support from the CTL and up to \$2,000 for a one semester period.

SPRING 2023 AWARDEES

Below is the list of projects launched during the 2023-24 academic year with CTL support.

Kirkwood Adams, Lecturer in the Discipline of English and Comparative Literature

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

Tyra M. Banks, Assistant Professor, Rehabilitation and Regenerative Medicine (Occupational Therapy), Columbia University Irving Medical Center

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

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

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

Robert J. Morais, Lecturer in Business, Graduate School of Business

Kamel Jedidi, Jerome A. Chazen Professor of Global Business, Graduate School of Business

PROJECT: "Applying AI to Teaching Market Intelligence"

Guadalupe Ruiz Fajardo, Senior Lecturer in Spanish

PROJECT: "Samples of Service Encounter Interactions for Elementary Spanish I"

Talha Siddiqui, Lecturer in the Discipline of 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 and Professor of Biomedical Informatics

Sergey Kisselev, Data Manager, Department of Nursing Scholarship and Research

PROJECT: "Generative Artificial Intelligence for Nurses (GAIN)"

SPRING 2024 AWARDEES

Below is the list of funded projects that will be developed and released in the 2024–25 academic year with CTL support.

Sally Aboelela, Assistant Professor, School of Nursing

PROJECT: "Using Generative AI to Close Individual Learning Gaps Post-Summative Assessments"

Gina Badalato, Associate Professor of Urology, Columbia University Irving Medical Center

Catherine McManus, Assistant Professor of Surgery, Columbia University Irving Medical Center

PROJECT: "Set for Success on Surgical Services: A Medical Student Podcast Series Covering Key Aspects of Clerkship Performance Expectations"

Andrew Brehm, Adjunct Assistant Professor of Visual Arts, School of the Arts

PROJECT: "Glass Module"

Greg Freyer, Professor of Environmental Health Sciences, Columbia University Irving Medical Center

April Autry, Associate in Population and Family Health, Mailman School of Public Health

Roxanne Russell, Adjunct Assistant Professor of Health Policy and Management, Mailman School of Public Health

Jonathan Zaccarini, Digital Learning Support Specialist, Mailman School of Public Health

PROJECT: "Investigating Public Health Student Experiences with ChatGPT Essay Comparison"

Luca Iemi, Term Assistant Professor of Neuroscience and Behavior, Barnard College

PROJECT: "Fostering Interdisciplinary Thinking through a Case Study on the Lived Experience of Hallucinations in a Traumatized Immigrant Community"

Roman Nowygrod, Professor in the Department of Surgery, Columbia University Irving Medical Center

Caitlin Silvestri, Postdoctoral Research Scientist in the Department of Surgery, Columbia University Irving Medical Center

PROJECT: "'FeedForward': An AI Tool for Creating Summative Feedback and Individualized Learning Plans for Surgery Clerkship Medical Students"

Rini Banerjee Ratan, Berkowitz Family Professor of Women's Health, Obstetrics and Gynecology, Columbia University Irving Medical Center

PROJECT: "Oral Health and Pregnancy: An Educational Module for Medical Students in the Ob/Gyn Clerkship"

Zhongqi Shi, Senior Lecturer in the Department of East Asian Languages and Cultures

PROJECT: "Enhancing Business Chinese Students' Job Interview Readiness: Leveraging AI Tools for Personalized Preparation"

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.

SPRING 2024 AWARDEES

Below is the list of funded projects that will be developed and released in the 2024–25 academic year with CTL support.

Jelani Cobb, *Dean, Graduate School of Journalism*

Kate Kennedy, *Director of Professional Programs, Graduate School of Journalism*

COURSE: “OpEd Writing”

Donald Green, *Burgess Professor of Political Science*

COURSE: “A Hands-On Introduction to Social Science Experiments”

Hardeep Johar, *Senior Lecturer in the Discipline of Industrial Engineering and Operations Research, Fu Foundation School of Engineering and Applied Science*

COURSE: “Generative AI for Business”

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

COURSE: “Curiosity”

Large-Scale Teaching and Learning Grants

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

SPRING 2023 AWARDEES

Below is the list of projects launched during the 2023–24 academic year with CTL support.

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

PROJECT: “Columbia Law School Teaching Assistants Program”

Jeremy Dodd, *Senior Lecturer in the Discipline of Physics*

Rebecca Grossman, *Lecturer in the Discipline of Physics*

Eric Raymer, *Lecturer in the Discipline of 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”

Jay Sethuraman, *Professor, Industrial Engineering and Operations Research, Fu Foundation School of Engineering and Applied Science*

Yi Zhang, *Lecturer in the Discipline of 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*

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

SPRING 2024 AWARDEES

Below is the list of projects that will be developed in the 2024–25 academic year with support from the CTL.

Michael Joseph, *Director of Research Finance, Obstetrics and Gynecology, Columbia University Irving Medical Center*

Lauren Kane-Sample, *Director of Digital Learning, Mailman School of Public Health*

Roxanne Russell, *Adjunct Assistant Professor of Health Policy and Management, Mailman School of Public Health*

Elizabeth Schroeder, *Director of Educational Programs, Mailman School of Public Health*

PROJECT: “Implementing Blackboard Ally at Columbia Mailman School of Public Health”

Samantha Lu, *Director, International Student Services Office*

Chad Goeden, *Associate Director, International Student Services Office*

James Lee, *Assistant Director, International Student Services Office*

Sarah Jubinski, *Associate Provost for Academic Initiatives, Office of the Provost*

PROJECT: “Global Leadership Advancing Student Success (GLASS) Online Curriculum: Professional Development Program (PDP) for International Students”

Allie Obermeyer, Associate Professor of Chemical Engineering, Fu Foundation School of Engineering and Applied Science

Kyle Bishop, Professor of Chemical Engineering, Fu Foundation School of Engineering and Applied Science

Christopher Chen, Lecturer of Chemical Engineering, Fu Foundation School of Engineering and Applied Science

PROJECT: "Implementing Standards, Assessment, and Support for Graduate Teaching in Chemical Engineering"

Jennifer Rhodes, Lecturer, School of Professional Studies

Larry Jackson, Director of the Center for the Core Curriculum, Columbia College

PROJECT: "Core Studio: Building a Material Arts Workshop to Foster Interdisciplinary Learning Across the Core Curriculum"

Peter Susser, Senior Lecturer in the Department of Music

PROJECT: "The Multi-Sensory Ear Training Classroom: Pedagogical Inclusivity in the Department of Music"

Lisbeth Uribe, Teacher, The School at Columbia University

Julie Broderick, Teacher, The School at Columbia University

Jeffrey Cortez, Technology Specialist, The School at Columbia University

PROJECT: "Empowering Pedagogy"

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. Developed by 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.

Faculty Spotlight



Taylor Sewell, Carri Chan, and Peter Tollman on Redesigning Their Interdisciplinary Course

"Consulting Practicum: Healthcare Management, Design, and Strategy (HMDS)" is an interdisciplinary course taught by Taylor Sewell, Assistant Professor of Pediatrics at CUIMC; Carri Chan, John A. Howard Professor of Business, Decision, Risk, and Operations Division; and Peter Tollman, Adjunct Assistant Professor of Business and Executive in Residence, Columbia Business School. Professors Sewell, Chan, and Tollman were awarded an Office of the Provost Interdisciplinary Teaching Award grant to help redesign elements of their unique project-based course.

SPRING 2023 AWARDEES

Below is the list of projects launched during the 2023–24 academic year with CTL support.

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 and Curriculum Development between the Department of African American and African Diaspora Studies (Morningside) and Reid Hall (Paris)"

Describe your course and some of the challenges you faced.

HMDS is an interdisciplinary, masters-level course that brings together business students and health professions students from the medical, nursing, dental, and public health schools. The course uses an experiential, project-based learning approach where student teams work to solve a real-world strategic challenge for sponsoring healthcare organizations. The course was successful in its first iteration in Fall 2021, yet we identified several opportunities for improvement, such as devoting more in-class time for students to work on their projects, developing modular support and training programs for the varied academic backgrounds of the students, adjusting the coaching structure, and improving the enrollment process for better sponsor experiences.

What were the main redesigned elements in the course?

We worked with the CTL to create asynchronous pre-recorded lecture videos of Peter discussing different methods, skills, and models related to consulting. Working with CTL's media production and learning design team, we produced over 2.5 hours of high-quality content that was integrated into our CourseWorks site.

Shifting content delivery to the online environment allowed more in-person class time for students to work together on their projects and for us to provide coaching to the groups. One of the main changes we made in the coaching process included giving each team a specific instructor to mentor them, allowing students to get more consistent and higher-quality feedback. We also provided upfront tutoring of individual teams to help ensure that the structure of the engagements and work plans were well-suited to the strategic challenges posed. Lastly, we improved content and teaching materials so that they are more closely tied to the "tradecraft" of real-world strategic problem-solving in healthcare settings.

What did your students have to say about the redesigned elements of the course?

Overall, our students were very enthusiastic about the content, organization, and learning opportunities provided by the class. In particular, the redesign elements allowed students to apply their understanding of the presented concepts earlier in the semester, giving them a richer experience and the opportunity to focus on the collaborative environment this course creates. Here is some student feedback we have received on our end-of-course evaluations:

"Coming in without a background in consulting or healthcare, I was a bit apprehensive. But, wow, I learned a lot! Your guidance was invaluable, and the whole experience of working in a team with both business and med students was particularly enriching. Everyone brought their A-game and unique views, and it was great to see everyone bringing their unique perspectives to the table and fully engaging in their project roles."

"Honestly, this has to be one of the best courses I've taken. The insights I gained about the consulting and healthcare fields, coupled with the interdisciplinary challenges and rewards, were outstanding."

"I think the course was well scaffolded—the combination of introductory videos, weekly updates, and the mixing of different expertise helped bring together people of different expertises and, as someone who has no business background, helped me learn a lot about how these kinds of questions are addressed in the business setting. I also thought the fireside chats were particularly strong."

Do you have any advice for other faculty who are considering applying for a Provost's Teaching and Learning Grant?

The Provost's Teaching and Learning Grant provided us with the resources to make meaningful improvements to our course that would not have been possible without the grant. For example, because students are coming to our classroom with varied skills, it is important to ensure additional support for students who may have gaps in their training for some aspects of the course, while also allowing them to highlight the areas where their skills are more developed. The grant allowed us to develop asynchronous videos on the business consulting concepts so that students could digest the material at their own pace, depending on their background and training. In addition to the funding, the grant provides support in the form of the Center for Teaching and Learning staff, who have a wealth of experience and expertise to help with course redesign.

Read the full spotlight:

<https://ctl.columbia.edu/spotlight/sewell-chan-tollman/>

Sandra Goldmark, Professor of Professional Practice in Theatre and Director of Campus Sustainability and Climate Action, Barnard College; Senior Assistant Dean for Interdisciplinary Engagement, Columbia 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, Senior 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"

SPRING 2024 AWARDEES

Below is the list of funded projects that will be developed and released in the 2024–25 academic year with CTL support.

Laurel Daniels Abbruzzese, Associate Professor of Rehabilitation and Regenerative Medicine (Physical Therapy), Columbia University Irving Medical Center
Tyra M. Banks, Assistant Professor of Rehabilitation and Regenerative Medicine (Physical Therapy), Columbia University Irving Medical Center
Ashley Graham-Perel, Assistant Professor of Nursing, Columbia University Irving Medical Center
Anabelle Andon, Medical Education and Learning Specialist
Rosa Lee, Associate Professor of Medicine, Columbia University Irving Medical Center; Senior Associate Dean for Curricular Affairs, VP&S
Hetty Cunningham, Associate Professor of Pediatrics, Columbia University Irving Medical Center
PROJECT: "Fostering Inclusive Excellence in Health Professions Education: Developing a Collaborative Teamwork Curriculum for Diverse Teams"
Jonathan Giordano, Associate Professor of Emergency Medicine, Columbia University Irving Medical Center
Mary McGoldrick, Instructor of Emergency Medicine, Columbia University Irving Medical Center
PROJECT: "Developing a Simulation Educator Program for Health Profession Educators Across CUIMC"

Tian Zheng, Professor of Statistics
Sarah Hansen, Senior Lecturer in the Department of Chemistry
Caroline Marvin, Dean of Academic Affairs, School of General Studies
PROJECT: "Research Since Day One: Building a Community of Practice for Course-based Undergraduate Research Experiences (CUREs)"

SOLER Seed Grant

In 2020, 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 2023 AWARDEES

Below is the list of projects launched during the 2023–24 academic year with SOLER support.

Jean Marie Alves-Bradford, Associate Clinical Professor of Psychiatry, Columbia University Irving Medical Center
PROJECT: "Evaluating the Effectiveness of an Upstander Training Across Modalities"
Ashli Carter, Lecturer in the Discipline of Management, Columbia Business School
PROJECT: "Collaborative Art and 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, Planning and Preservation
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, Columbia University Irving Medical Center*

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"

SPRING 2024 AWARDEES

Below is the list of funded projects that will be developed in the 2024–25 academic year with support from SOLER.

Christopher Eckdahl, *Lecturer in the Department of Chemistry*

PROJECT: "Preparing for College Through COVID: Impacts of Disrupted and Online High School Learning on General Chemistry Readiness"

Seyhan Erden, *Lecturer in the Department of Economics*

PROJECT: "Evaluating the Impact of MetricsMentor—An Interactive Visual Graphical Platform for Econometrics Courses"

Paul Ingram, *Kravis Professor of Business, Graduate School of Business*

PROJECT: "Practices and Implications around Concealment of Social Class Identities Among Graduate Students in Engineering"

Christine Mauro, *Assistant Professor of Biostatistics, Mailman School of Public Health*

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

Roxanne Russell, *Adjunct Assistant Professor of Health Policy and Management, Mailman School of Public Health*

Matthew Lamb, *Assistant Professor of Epidemiology, Mailman School of Public Health*

PROJECT: "Nudges in Public Health Education: Tailored Nudges to Increase Engagement in Quantitative Analysis Coursework"

Roman Nowygrod, *Professor of Surgery, Columbia University Irving Medical Center*

Caitlin Silvestri, *Postdoctoral Research Scientist in the Department of Surgery, Columbia University Irving Medical Center*

PROJECT: "'FeedForward': An Artificial Intelligence (AI) Tool for Creating Summative Feedback and Individualized Learning Plans (ILPs) for Surgery Clerkship Medical Students"

Zhongqi Shi, *Senior Lecturer in the Department of East Asian Languages and Cultures*

PROJECT: "Testing the Efficacy of Dialogic Feedback in Enhancing Public Speaking Skills"

Talha Siddiqui, *Lecturer in the Department of Chemistry*

PROJECT: "StreamLine"

Support for Faculty

**3,673 interactions with
Columbia faculty**

**1,378 services provided to
Columbia faculty**

**765 faculty participants at
CTL programs and events**



A new faculty member with CTL Executive Director Catherine Ross 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.

Highlight for Faculty

Adapting to the Needs of the Teaching Community

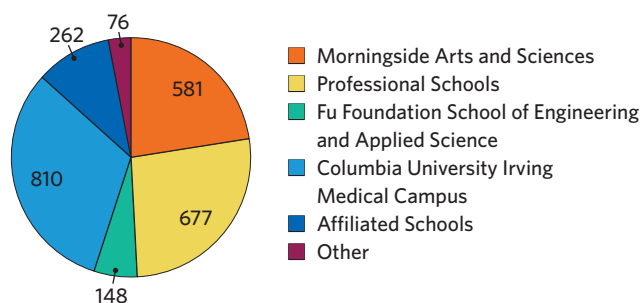
This past year, the CTL developed numerous custom offerings to adapt and respond to the diverse needs of Columbia faculty across the University. 2,554 total faculty have attended CTL custom offerings since the inception of the program in 2016 (see pie chart). For example, in Fall 2023, the CTL facilitated a customized “Teaching in Times of Stress and Challenge” workshop for School of Social Work faculty to share their strategies, experiences,

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and pedagogies of care practices. CTL staff also developed and facilitated a mentoring-related workshop on “Assessing Understanding” for Fu Foundation School of Engineering and Applied Science (SEAS) faculty in the Summer Undergraduate Research Experience (SURE) program in May 2023, in which participants discussed a cycle of practice and feedback and a tailored case study to surface strategies that apply to their mentoring context.

In addition to custom workshops, the CTL also expanded its “Workshops To Go” offerings this year, an on-demand offering for departments interested in hosting a pedagogical workshop for their faculty. New workshops included “Getting Started with Active Learning,” “Making Your CourseWorks Site More Accessible,” and several new mentoring-related workshops as part of the “Entering Mentoring” series, including “Aligning Expectations,” “Maintaining Effective Communication,” “Assessing Understanding,” “Fostering Independence,” and “Addressing Equity and Inclusion.” Lastly, to meet faculty where they are, CTL was available for consultations and office hours Monday-Friday, 9am–5pm. Faculty requested 1,371 one-on-one consultations with CTL staff to receive support for their teaching and learning needs throughout the year.

2,554 Faculty Participants in Custom Workshop Offerings 2016–2024



2,554 Faculty Attendees at CTL Custom Workshops

Programs and Initiatives

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

INSTITUTES

152 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 its foundational Active Learning Institute this year, open to both Morningside and CUIMC faculty. To read about other Institutes, please see the Support for CUIMC Faculty section on page 40.

Active Learning Institute

In this four-day immersive online experience, held in June 2024, 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. Faculty completed a series of hands-on activities and discussions over Zoom and CourseWorks (Canvas) to work through the essential components of designing engaging student learning experiences. Topics addressed included facilitating individual and collaborative learning activities, planning

and creating effective instructional materials, and fostering and maintaining an inclusive course climate. Faculty left with a detailed map of their redesigned course unit and one carefully planned multimedia-based active learning experience ready to be used in their course. This year's participants also joined a growing network of over 100 Institute alumni committed to designing and implementing active learning across the University, and will be invited to gather once per semester to share and learn from their experiences implementing active learning strategies in their courses.

OFFICE OF THE PROVOST FACULTY ORIENTATION

In September 2023, the Center for Teaching and Learning and Office of the Vice Provost for Faculty Advancement (OVFA) partnered to offer the online Office of the

"I think more than anything, the Active Learning Institute (ALI) gave me time and space to reflect on what type of instructor I wanted to be and what I wanted that classroom experience to look like for my students and also for myself. That week-long course helped me take a more bird's eye view of my course and think through the learning objectives for each class and how I could create both in- and out-of-class activities that can lead to accomplishing those objectives and create a dynamic learning atmosphere. ALI and the CTL staff provided tangible models for active learning and modeled those within the ALI course itself which allowed me to see what they could actively look like. ALI helped me revisit some classes and materials that I had already developed and challenged me to think through how I could adapt them to be more interactive and student-centered [...] When I began as an instructor at the Columbia School of Social Work, I had a lot of training experience but this was going to be one of my first formal teaching roles. I did ALI after my first year of teaching and it gave me so much more confidence in my practice and gave me so many ideas on how I could create those dynamic and active learning environments that were based on evidence and best practices. It made me think more mindfully of my practice and just gave me opportunities to think through how I could expand my teaching beyond just the lecture and involve students more actively which, based on student feedback, has been well-received and meaningful to them."

— **Christopher Ferraris**, *Lecturer in Social Work*

Provost Faculty Orientation to welcome and acclimate faculty to the 2023–24 academic year. This virtual orientation program aimed 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 comprised a series of online self-paced CourseWorks modules and acquainted 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 2023. Columbia President Minouche Shafik and Interim Provost, Executive Vice President for University Life, and Senior Vice Provost for Faculty Advancement Dennis Mitchell welcomed faculty. Dennis Mitchell and Catherine Ross, CTL Executive Director, then shared information about the OVPFA and CTL, respectively. The event also featured a surprise performance by the Columbia student a cappella group The Clefhangers.

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 2023–24 academic year. The CTL offered the following workshops and events. Additional workshops are detailed in the “CTL-Wide Accomplishments” section on page 10.

442 faculty participants in CTL workshops and events

Assessment Tune-Up for Provost Grant Applicants

This session, for any faculty interested in applying for the innovative teaching grants offered by the Office of the Provost, was a short workshop on writing the evaluation and assessment section of the grant proposal.



Faculty at the Office of the Provost Faculty Orientation.



CTL Executive Director **Catherine Ross** speaks at the Office of the Provost Faculty Orientation.



A performance by the Columbia student a cappella group “The Clefhangers” at Faculty Orientation.



Faculty work with CTL Assistant Director **Jamie Kim** in a workshop.

Participants explored strategies for evaluating the effectiveness of their projects and had an opportunity to receive feedback on their evaluation plans. (Spring 2024)

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. This workshop combined 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 2023)

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. (Fall 2023 and Spring 2024)

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. Participants reflected on their current practices around discussion, preparation, and facilitation, and identified potential changes they might implement going forward. (Fall 2023 and Spring 2024)

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 2023 and Spring 2024)

Engaging Students with Poll Everywhere

Participants experienced a short demonstration of Poll Everywhere and were then given opportunities to ask questions and to reflect on how they might intentionally integrate Poll Everywhere into their teaching context. (Fall 2023 and Spring 2024)

"I'm deeply grateful for the creative designing and technical support of M. Aurora Rodriguez Collado, a learning designer at CTL. Aurora has guided me through the development of two websites, eBOIARDO (Epics of Boiardo and Other Italian Authors: A Research Database Online) and World Epics. I'm in awe of both her acumen in exploring new structural options and her equanimity in resolving technical issues. My students not only draw from both websites when conducting their research, but they also use the first site as the online home of their own creative projects."

— **Jo Ann Cavallo**, *Professor of Italian*

Getting Started with Active Learning

In this session, participants 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. (Fall 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 2023)

It's In the Syllabus! Or is it?:

Designing a Transparent Syllabus

In this interactive session, participants reviewed each other's syllabi from a student perspective, leveraging a checklist developed from the CTL's online resource "Designing an Inclusive Syllabus." Participants gained skills to identify overarching considerations of transparent and inclusive syllabus design, to identify the elements of a syllabus and inclusive moves within each element, and to enact small changes to their own syllabi for inclusivity and transparency. (Fall 2023)

Making Feedback Matter:

Strategies That Serve You and Your Students

Participants explored the connection between feedback and student learning, focusing on strategies for giving feedback that is actionable, timely, and efficient. Through reflections on current feedback practices and whole group discussions, participants considered their individual feedback approaches and incorporated evidence-based strategies that are transparent, time-saving, and effective. (Fall 2023)

Making Your CourseWorks Site More Accessible

Participants learned about ways to improve the accessibility of their CourseWorks site for all students. They learned how to use the Ally accessibility checker, how to improve the accessibility of their course materials, and how to make their site more welcoming and easy to navigate. (Spring 2024)

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 2023)

Provost's Teaching and Learning Grants RFP Town Hall

In the RFP Town Hall, instructors were made aware of the types of Office of the Provost's Teaching and Learning Grants offered in 2024, the kinds of projects eligible for the grants, and the application process. (Spring 2024)



Faculty collaborate and share thoughts in CTL workshops.



Teaching Inclusively From the Start

In this session, participants reflected on their teaching practices and considered five principles of inclusive teaching. Participants collaborated with colleagues, shared ideas, and left with strategies to implement in their courses. (Fall 2023 and Spring 2024)

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. (Fall 2023)

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 2023–24, 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:

- **Engaged Lecturing:** CTL staff led this workshop for faculty in the Institute of Human Nutrition in the Vagelos College of Physicians and Surgeons.
- **Ways to Be More Inclusive in Your Course:** CTL staff led this workshop for faculty in Teachers College, and the Center for Undergraduate Global Engagement at Columbia College.
- **Effective Feedback in Clinical Settings:** CTL staff led this workshop for faculty in the departments of Rehabilitation and Regenerative medicine, General Surgery, and the Genetic Counseling program in the Vagelos College of Physicians and Surgeons.
- **Engaging Students in Discussions:** CTL staff led this workshop for faculty in the Institute of Human Nutrition in the Vagelos College of Physicians and Surgeons.
- **Introduction to Courseworks:** CTL staff led this workshop for faculty in the School of Social Work.
- **Navigating HOT Moments: Before, During, and After Class:** CTL staff led this workshop for faculty at Teachers College, and ran two sessions for faculty at the School of Nursing.

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.

Department of Astronomy

- **Astronomy Syllabus Design: Aligning Assessments to Learning Objectives:** As part of the redesign of their graduate curriculum, Astronomy faculty received an overview of syllabus design and the backward design framework before working in pairs to focus on designing learning objectives and assessments for their redesigned graduate-level courses. (December 13, 2023)

School of Engineering and Applied Science

- **Mentoring Discussion on Assessing Understanding (SURE Faculty in SEAS):** Through a facilitated discussion on Assessing Understanding, faculty mentors in the Summer Undergraduate Research Experience (SURE) program learned about a cycle of practice and feedback and surfaced strategies that apply to their mentoring context through group discussion and a case study. (May 28, 2024)

School of Social Work

- **Canvas Training for New Course Instructors** (January 11, 2024)
- **Teaching in Times of Stress and Challenge:** The CTL facilitated a conversation on strategies for teaching in times of stress, invited participants to share their experiences and their pedagogies of care practices, and created space for faculty to discuss the issues they are grappling with in the classroom. (November 13, 2023)

Services

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

CONSULTATIONS

Faculty requested 1,371 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, scheduled in advance or during CTL virtual office hours for faculty seeking immediate support. CTL Learning Designers held office hours Monday–Friday from 9am–5pm for faculty to call in with any questions. 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 2023–24, 13 teaching observations were conducted for faculty across eight 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, visit <https://ctl.columbia.edu/resources-and-technology/teaching-with-technology/>*

“My engagement in a CTL Teaching Observation has positively impacted my teaching practice. In particular, John [Foo]’s detailed feedback has helped me slow down the pace of my lecture. Similarly, John’s suggestion has enabled me to improve the effectiveness of the usage of the blackboard space. Overall, the CTL Teaching Observation has helped me support students in engaging with the course content.”

— **Tanvir Ahmed Khan**, *Assistant Professor of Electrical Engineering*

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. In 2023–24, Columbia instructors utilized the DIY studios for 119 sessions, more than three times the amount of sessions as the previous year.

EdBlogs

EdBlogs make it easy to share course content and create an online community using a blogging format. A customizable EdBlogs site is available 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 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 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

Incorporating Generative AI in Teaching and Learning: Faculty Examples Across Disciplines

This resource offers a glimpse into the approaches of faculty across disciplines as they experiment with AI in their classrooms and teach AI literacy to their students.

Four Ways to Make Your CourseWorks Site More Accessible

This resource includes course design tips to help faculty get started on increasing accessibility in their CourseWorks sites and highlights a tool called Ally, an accessibility checker integrated into CourseWorks.

Navigating Heated, Offensive, and Tense (HOT) Moments: Before, During, and After Class

Regardless of course topic or content, challenging conversations, moments of rupture or disruption, and heated encounters may occur in the classroom. Though they are complicated and can be difficult to respond to, there are steps instructors can take to anticipate and navigate HOT—heated, offensive, or tense—moments before, during, and after they occur. This resource provides strategies that can be implemented in any course context.

Teaching and Learning in the Age of AI: Considerations, Resources, and Opportunities

This page is a compilation of all CTL resources and programming on teaching and learning with Artificial Intelligence (AI).

Teaching in Times of Stress and Challenge

Emotions play a vital role in teaching and learning, and it is especially important to be responsive to the vast range of emotions that may surface in the classroom during challenging times. This resource offers strategies for teaching during times of stress and highlights campus supports available to help instructors and their students navigate challenges.

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 68,757 times. The guide offers five research-based inclusive teaching principles, as well as practical, accessible, and usable evidence-based strategies that instructors can implement immediately.

324,896 total pageviews on CTL website.

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 588 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 18,510 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 1,386 enrollments by faculty and instructors.

Support for Faculty at Columbia University Irving Medical Center

1,859 interactions with CUIMC faculty

684 services provided to CUIMC faculty

**591 faculty participants at CTL
programs and events**

In addition to the range of faculty development programs and services available to faculty across all of Columbia's schools and 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 an institute, customized workshops, and extensive Provost grant support to address the specific teaching needs of schools, departments, and other academic units at CUIMC.

Faculty Spotlight



Danielle Struble-Fitzsimmons

Incorporating Simulation and Case Studies in Physical Therapy to Improve Inclusivity and Student Learning

Danielle Struble-Fitzsimmons, Assistant Professor of Rehabilitation and Regenerative Medicine (Physical Therapy) and Director of Clinical Education, was awarded an Office of the Provost's Innovative Course Design grant. Her project centered on the Doctor of Physical Therapy (DPT) course "PHYT M8311: Management of Integumentary Impairments" which focuses on physical therapy management for individuals with integumentary impairments, i.e., impairments to their skin and its associated structures including the hair, nails, and glands. Dr. Struble-Fitzsimmons worked with the Center for Teaching and Learning to expand the lecture and laboratory components of the existing course by adding ten diverse skin-tone integumentary-focused anatomic simulation models with related case studies, with the intention of: 1) extending opportunities for hands-on practice of skills related to physical therapist examination and treatment of integumentary conditions, 2) improving integumentary-related clinical decision making in case-based scenarios, and 3) addressing known diversity gaps in integumentary-related academic materials.

Why did you redesign this course?

The assessment and management of integumentary-related impairments is a key component of the physical therapist scope of practice. While some licensed physical therapists specialize in wound care, physical therapists working in all areas of clinical practice are required to

demonstrate foundational knowledge and skills related to integumentary dysfunction. In 2023, the American Physical Therapy Association Academy of Clinical Electrophysiology and Wound Management released updated guidelines for academic DPT programs to improve content consistency and prepare students for entry-level practice; these guidelines recommend the use of simulation and case-based design.

Integumentary dysfunction and wounds present differently on skin of various colors and tones. There is a significant body of research describing the lack of representation of diverse patient characteristics in related medical education materials (including textbooks and medical journals), particularly regarding skin color and tone, with non-white skin being significantly under-represented in visual materials. This gap in academic preparation translates to health disparities for patients of color who have wounds or other integumentary conditions. Studies have shown that healthcare practitioners have difficulty diagnosing skin conditions in individuals with darker skin tones, resulting in delayed diagnosis and less favorable outcomes for patients. To reduce these health inequities, academic programs must incorporate learning materials that reflect the diverse patients that students are being trained to care for.

This course redesign integrated new technology (anatomical simulation models) and case-based learning strategies to improve student learning outcomes.

What resources did you and your team need to redesign the course?

CTL services were requested to assist with: 1) case-study learning design, 2) development of rubrics for student feedback and assessment, and 3) development of post-experience surveys for students and lab instructors. A total of 10 anatomical simulation models and two storage cases were purchased with grant funds.

How was the student experience enhanced?

The simulation models provided students a consistent opportunity to learn and practice new psychomotor skills. The lab sessions were structured using a timed and rotating "station" model approach that paired small groups of students with 1-2 lab instructors. Each station had designated learning objectives, included use of related simulation equipment, and emphasized hands-on skill development. The lab instructors provided brief group

instruction or skill demonstration, but their primary goal during each session was to offer students individualized instruction and performance-related feedback.

The patient cases were threaded through the lecture and lab content to again provide consistency and promote deeper learning and engagement. The weekly case-study homework assignments included 1-2 patient cases, 2-3 related medical journal articles, and 2-3 open-ended questions that emphasized clinical decision-making (for example, selection of tests) and psychosocial aspects of care delivery (for example, social support, weight bias, and financial barriers). Students used the materials to answer short, open-ended questions to integrate these topics. In addition, the cases were used as the foundation of the final lab session, which emphasized cognitive (clinical decision making) and psychomotor (hands-on assessment and treatment skills) learning objectives.

This is a new way of teaching for you, but also for your students. How did they react to this new approach?

The final outcomes exceeded the initial expectations for both the simulation equipment and patient case studies. Students and lab instructors engaged meaningfully with the equipment during lab sessions. Non-scientifically, students appeared to have a lot of fun in the labs! They came prepared, asked questions, and demonstrated

interest in the content. 100% of students successfully passed the course final lab practical, demonstrating successful skill acquisition.

Students also had positive feedback about the case studies and were noted to put great effort into the related homework assignments, often writing more length and content than required, indicating a sincere commitment to their learning.

Do you have any advice for other faculty who are considering redesigning their courses?

A key element to the success of this redesign was the feedback that I received from the CTL Learning Designers. Both Nigel [Frazier] and Alexis [Cho] listened to me, supported my vision, and provided meaningful insight and suggestions related to course operations, learning strategies, technology, and feedback. For me, the key takeaways from this overall experience were: 1) backward design promotes learning and impact, 2) feedback solicitation from multiple stakeholders at multiple points is important, and 3) a willingness to try new instructional practices can be challenging, but is well worth the effort.

Read the full spotlight: <https://ctl.columbia.edu/spotlight/struble-fitzsimmons/>

Summer Institute for Teaching and Learning for CUIMC Faculty

The CUIMC Summer Institute for Teaching and Learning is a cornerstone event at CUIMC, devoted to exploring effective teaching and learning strategies in health sciences education. The institute is designed for faculty to learn about foundational pedagogy and interactive teaching techniques in a collaborative setting with other faculty across the CUIMC campus. Topics covered include: effective course design for face-to-face or online classrooms, designing student-centered activities, and creating inclusive learning environments. The institute celebrated its 17th iteration in July 2024. Over the past 17 years, the institute has averaged 25 participants, five table facilitators, and five presenters.

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 and 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.

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

Developing an Upstander Curricular Thread Throughout the Medical School Curriculum with Jean-Marie Alves-Bradford

Led by Jean-Marie Alves-Bradford, Associate Professor of Psychiatry and Associate Dean for Student Affairs, Support and Services at VP&S, the "From Bystander to Upstander" project, begun in 2021, was developed to emphasize advocacy, allyship, and upstander skills. The project uses videos, interactive tutorials, and case-based scenarios to help students and faculty recognize and respond to

discrimination and bias that they may either experience or witness during their medical education and beyond. In 2023, the project was expanded with an Interdisciplinary Teaching Initiative award, and CTL staff worked with Dr. Alves-Bradford on the following components:

1. A series of videos depicting microaggressions in the medical setting. These videos are in addition to the six videos that were produced for the previous grant project.
2. A “Train the Trainer” series to prepare faculty “Upstander Champions” from across CUIMC to engage as facilitators of upstander skills training. CTL staff created a training course which includes an asynchronous module on key ideas of identity, power and privilege; lesson plans and facilitator guides for each upstander video; a list of additional resources for upstander champions on forms of bias and their impact in healthcare; an asynchronous session on “How to Facilitate Conversations About Bias”; and a series of four synchronous training sessions which were run between May and June, 2024.
3. A set of interactive modules to provide participants with practice evaluating situations in which upstander skills may be necessary. CTL staff developed a structure for the interactives that encourages engagement with the module, and they launched three interactive modules.

Integrating AACN’s Essentials: Core Competencies into the Advanced Clinical Management and Leadership Program with Kathy Mullen

The Advanced Clinical Management and Leadership (ACML) program in the School of Nursing is focused on mapping its curriculum to the core competencies of the American Association of Colleges of Nursing’s (AACN) Essentials. As part of this project, CTL staff created a course mapping tool which reduces the time commitment of the mapping process and facilitates the analysis of the mapping output. Additionally, on March 6, the CUIMC team presented a custom session on “Assessment Practices in Competency Based Education” to support the ACML faculty.

Enhancing Support for Clinical Educators: New Inclusive Teaching Resource for CUIMC Faculty

The CTL has continued to build additional support for CUIMC faculty teaching in the clinical setting. In October 2023, the CTL launched the resource “Applying Inclusive Teaching Principles to Clinical Education.” This resource

is intended to support clinical educators in applying the five research-based principles of inclusive teaching, as described in the Guide for Inclusive Teaching at Columbia, to the clinical setting.

Clinical Teaching Series

The CTL hosted the Clinical Teaching Series workshops for the second year to support teaching that occurs within clinical environments.

Effective Feedback in Clinical Settings

Participants explored elements of effective feedback and worked on enhancing their feedback skills through an activity in which they evaluated and rephrased feedback statements. Participants learned to identify when effective feedback should be given, evaluate what content should be included in clinical feedback, and select different models for feedback delivery. (Fall 2023)

Applying Inclusive Teaching Principles

This session outlined the importance of inclusive teaching in the clinical setting and examined how the five principles of inclusive teaching outlined in the Guide for Inclusive Teaching can be applied to the clinical education environment. (Fall 2023)

Customized Workshops

The CTL facilitated the following customized workshops for CUIMC faculty:

School of Nursing

- Teaching in Times of Stress and Challenge: This session was held in collaboration with the School of Nursing’s Office of Diversity and Cultural Affairs. (November 15, 2023)
- Applying Backward Design to Competency Based Education (March 6, 2024)

Institute for Human Nutrition

- Mapping Course Assessments to Program-Level Outcomes: CTL hosted this workshop to support the Institute for Human Nutrition’s curriculum mapping efforts. (May 28, 2024)

CUIMC Climate Committee

- Navigating HOT Moments Before, During, and After Class (April 5, 2024)

Support for Graduate Students

5,098 interactions with
Columbia graduate students

1,380 services provided to
Columbia graduate students

1,940 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/>

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Highlights for Graduate Students

Graduate Student Advisory Committee

In Fall 2023, the CTL launched a new Graduate Student Advisory Committee. Guided by CTL staff, the committee has two broad purposes: to engage a diverse range of student communities across the Columbia campus and, in so doing, to obtain community-centered input and advice on CTL graduate student teaching support.

The inaugural Advisory Committee consisted of eight graduate students from seven schools across Columbia who met four times during the 2023–24 academic year and focused on rethinking and refreshing the CTL's Teaching Orientation for Graduate Student Instructors. Outcomes included: an expanded in-person orientation and additional asynchronous resources planned for Fall 2024, recommendations for departments organizing their own orientations for first-time graduate student

2023–24 Graduate Student Advisory Committee members

Sara Samuel , Mailman School of Public Health (Advisory Committee Co-chair)	Nathanie Yaskey , School of the Arts
Anirbaan Banerjee , Graduate School of Arts and Sciences	Anika Tsapatsaris , Graduate School of Architecture, Planning and Preservation
Anwesha Sengupta , Graduate School of Arts and Sciences	Kelsey Reeder , School of Social Work
Jessica King , Teachers' College	Alexia Yun , Fu Foundation School of Engineering and Applied Science

instructors, and an episode of the CTL’s *Dead Ideas in Teaching and Learning* Podcast (Season 8, Episode 2: “Teaching Development in Doctoral Education: Let’s Ask the Grad Students!”), featuring three members of the Graduate Student Advisory Committee.

Center for the Integration of Research, Teaching and Learning (CIRTL) Fellowship

This year marked the re-launch of CTL’s CIRTL Fellowship for graduate students. In partnership with SEAS Engineering Student Affairs, the CTL supported CIRTL Fellows in developing projects that cultivate inclusive STEM teaching and learning communities, at Columbia and across the broader CIRTL Network. In this new iteration of the fellowship, fellows also facilitated a journal club to engage their peers with the scholarship of teaching and learning. In Spring 2024, that journal club extended to the international CIRTL Network audience and helped to build cross-institution relationships among graduate instructors. This increased visibility

on the CIRTL Network compliments the growing profile of the Columbia CTL in CIRTL programming: this year, Senior Lead Teaching Fellows continued to re-offer their successful learning communities on the CIRTL Network, attracting participants from across the globe.

Programs and 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. 184 students registered for the TDP in 2023–24, bringing the total TDP registrants to 954. Since its inception, 96 graduate students have completed the Foundational Track of the program, and 50 graduate students have completed the Advanced Track.



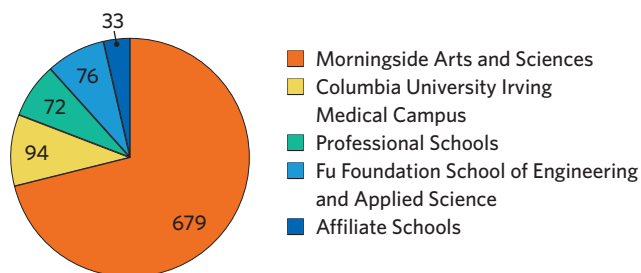
The Graduate Student Advisory Committee with CTL Senior Assistant Director Caitlin DeClerq.



The 2023–24 CIRTL Fellows.

Completion of a TDP track earns participants a letter outlining attained 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, Columbia Business School, the Graduate School of Journalism, and the Graduate School of Architecture, Planning and Preservation, and for MFA students in the School of the Arts.

954 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 to inform and guide 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 2023 and Spring 2024, CTL offered an 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

Student Spotlight



Bennett Slibeck, PhD Student in Earth and Environmental Sciences

Center for the Integration of Research, Teaching and Learning (CIRTL) Fellow

What is an important focus of your teaching?

How has the CTL helped you to pursue that focus?

As an earth scientist, one of the most important things for me is to help students develop a sense of relationality with the world around them. We live in a fantastically interconnected world, and this history of the rocks and plants beneath our feet factors into our lives in countless ways we don't even realize. Helping students train their ability to lift that veil is a constant goal of mine. Through the CTL, I've had the space and support to think about how to turn that goal into pedagogical practice, and how to implement that practice into my own classrooms. Even that simple step, of having a goal and knowing how to implement it, is something that would've seemed totally overwhelming before my time in the CTL, and I'm so grateful to be here now.

You have participated in the Teaching Development Program Sprint and served as a CIRTL Fellow, as well as engaging in other CTL programming—can you describe a couple of highlights from those experiences and how they have impacted your work?

The first thing that comes to mind was meeting peers from so many different backgrounds during the TDP Sprint, and realizing that at the end of the day, we did really have a lot in common. Good teaching isn't all the same, but it has a lot of throughlines. Getting to design lessons and compare thoughts with students from

departments outside my own was an absolute treat, and I'm still happy to see some of my table mates around campus! The second highlight for me was leading a Journal Club for the CIRTl network. Mentally, this felt like a huge test of my credibility, and I was sure I was going to have to be defending my every thought, word, and deed. I realized throughout the session, though, that my fears were unfounded. I had real insights to share, and they were valuable, despite any feelings to the contrary. I think one thing a lot of graduate students struggle with is finding that balance, and through the CIRTl Fellowship as a whole, I definitely gained confidence in my ability to make changes in higher education, and I want that confidence to be something more people have as well.

What are strategies that you use in your own teaching practice that new graduate student instructors might consider incorporating into their own practice?

The most important change I've made in developing my teaching practice has been being transparent with students. It can be a real challenge to feel any agency when you're a TA, or working with pre-provided course materials, but signposting to students why exactly we're doing what we're doing, or how it might help their learning, can not only boost their confidence to try new things, but also helps you as an instructor clarify your learning objectives. I've also tried to really hone in on a teaching signature (to borrow a phrasing from a CTL Symposium), as a form of identity building, but also as a mode of self-discovery. I know a lot of people who can define ways they don't want to teach, but being able to turn those into a positive, and then to live that positive, is going to be really important for any sort of career-long perspective. Taking the time early in your career to really think about who you want to be in the classroom increases your odds of becoming that person tremendously.

- Considering common TA challenges and campus resources that help to navigate them
- Documenting next steps for teaching and professional development

187 graduate students accessed CTL's graduate student orientation in 2023-24. 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.

2023-24 Essentials Sequence (ran each semester)

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 converse at the Essentials of Teaching and Learning workshops.



Graduate students working out assessment plans during this Fall's final Essentials workshop.



The 2024 cohort of TDP Sprint participants with CTL staff Mark Phillipson, Caitlin DeClercq, Ian Althouse, and Abby Schroering.

Teaching Development Program Sprint

The Teaching Development Program Sprint (TDPS), held in May 2024, 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 practice teaching session, and the development of course policy sheets 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, 46 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 and seminars 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 participate in the TDP Sprint.

148 graduate student participants in CTL seminar programs

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:

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 planned a range of learning activities to engage all learners. Their final syllabi used innovative formats to communicate their intentionality to students, including interactive websites, syllabi-as-surveys, and do-it-yourself collages. (Fall 2023)

Leveraging Learning Spaces Seminar

This seminar included five in-person convenings, and touched on themes of embodied cognition, sensory learning, and relationships between physical space,

"I attended the Leveraging Learning Spaces Seminar because embodied and emplaced learning is already really important to me as a former dancer and movement instructor. However, I was finding it difficult to bring my own embodied practices into the classroom because it required me to work against academic cultural norms that often devalue physically informed modes of teaching and learning. Through the seminar, I was able to find more freedom of body and mind as a student myself, and also gained many tools to incorporate movement, bodily sensations, and the physical space into my own classroom teaching. I am confident I will be able to implement these in ways that slowly shift classroom culture to celebrate and utilize students' (and teachers') vibrant physical presences."

— **Calleja Smiley Welsh**, MFA Student, Writing



The Innovative Course Design Seminar in action.

well-being, and learning outcomes. Participants explored the interplay of space and learning, developed an understanding of the relationships between sensory input, physical movement, and learning, and expanded definitions of learning spaces. (Spring 2024)

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

"The most valuable part of the TDP was the intensive seminar I took with Abby Schroering in the Spring of 2024. In that seminar, we explored Teaching-as-Research (TaR), where we turned our focus to our own classrooms to answer questions, collect data, and (hopefully) derive some meaningful results. I decided to explore the role of generative artificial intelligence in my own Physics laboratory class. I read literature exploring the use of technology more broadly, considering, for instance, the use of Wikipedia in classrooms in the late 2000s, and ultimately proposed a data collection and analysis plan to be conducted in a small, one-semester laboratory course to understand the role of generative AI in education. This exercise was extremely helpful for me in connecting the academic world to the classroom; I am looking forward to soon putting my research plan into action!"

— **Giancarlo Pereira**, PhD Student, Department of Physics

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 2024)

Advanced Topics in Teaching Workshops

In 2023–24, the CTL provided several advanced workshops to graduate students looking to acquire new pedagogical frameworks and to innovate their teaching.

Developing Critical AI Literacy

Similar to critical frameworks developed around information and digital literacy, this workshop gave instructors tools to approach AI with both practical and ethical considerations in mind. Participants provisionally defined critical generative AI (GenAI) literacy and brainstormed discipline-specific considerations and concrete next steps to support students' development of a critical GenAI. (Spring 2024 and TDP Sprint 2024).

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 2024)

Learning through Discussion

This workshop explored discussion as a tool to synthesize students' conceptual knowledge, practice making arguments, and identifying where students are in their learning journeys. Participants developed teaching through discussion skills by focusing on goal priorities, transparent expectations for student preparation, and assessment. (TDP Sprint 2024)

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. (Fall 2023, Spring 2024, TDP Sprint 2024)

The Sound of Silence: Understanding, Navigating, and Embracing Silence in the Classroom

This workshop reframed how instructors see and hear silence in the classroom by surfacing and reflecting on assumptions about student (and instructor) silence, identifying possible meanings and causes of silence, and strategizing interventions to help navigate—and even embrace!—silence in the classroom. (TDP Sprint 2024)

Student Spotlight



Emily Hawk, *PhD, Department of History*

CTL Teaching Development Program and Innovative Course Design Seminar Participant

What motivated you to apply for the Innovative Course Design Seminar (ICDS)?

I applied for ICDS because as a graduate of the liberal arts, I believe in the power of learning across disciplines and wanted to create an interdisciplinary survey course in my field of U.S. History. So often, undergraduates assume that History courses will be dull, presenting them with a series of names, dates, facts, and figures and requiring rote memorization. For this reason, combined with further assumptions about poor career prospects, History has suffered a decrease in majors and enrollments across the past decade. My ICDS survey course challenges these assumptions by presenting an engaging and exciting welcome to the discipline, emphasizing the transferable skills of historical thinking and writing for all students, regardless of intended major. Primary sources from politics, activism, performing arts, and literature are my core texts: I invite students to interpret these sources and use these windows for understanding the complexity of the past. This approach helps students trust in themselves as thinkers, writers, and informed citizens. During the ICDS sessions, I shared drafts of my syllabus with peers from other disciplines and asked if this course might have appealed to them as undergraduates. This feedback was very useful and helped me ensure that the syllabus was accessible and engaging at every turn.

What is an important theme in teaching for you?

How did the CTL help you pursue, communicate, or reflect on that theme?

My teaching is a deeply human practice, which comes from the importance of embodiment in my training as a dance historian and dancer. In a practical sense, this focus means intentional arrangement of classroom spaces, a mix of large- and small-group activities that sustain engagement and exchange of ideas, and using photograph and video examples to enliven discussion. Intellectually, this humanness means helping students recognize that the past was inhabited by fully embodied people who, like them, had duties, emotions, morals, aspirations, and sensory experiences. Throughout my time at Columbia, I have tried to bring this sensibility to my teaching in History and American Studies, especially when teaching topics beyond cultural history.

One goal I had at the CTL was to design a dance history course for the Teaching Scholars program, so that I could apply this pedagogical framework to my own area of specialization. I began drafting the syllabus in the CTL's Syllabus from Scratch workshop and ultimately taught the course "Dancing New York City in the 20th Century" in Spring 2024. The experience was one of the most fulfilling of my career so far. The course reached maximum enrollment and attracted students from across a wide range of majors, many of them beyond dance. Throughout the semester, students were fascinated by the way dance offered a new perspective on the history of New York City. They traced themes of mobility, space, belonging, and identity from vaudeville dance at Coney Island to ballet at Lincoln Center and breakdancing in the Bronx. By the end of the semester, students had developed the vocabulary

to describe and interpret embodiment and even became comfortable demonstrating movements and gestures during small-group discussions. The course affirmed my belief that embodiment is an incredible pedagogical tool that can make learning visceral, memorable, and meaningful for our students.

Why did you choose to enroll in the Teaching Development Program (TDP)? How did your engagement in the TDP prepare you both for teaching and for the academic job market?

I enrolled in the TDP to develop my own course for the Teaching Scholars program. I knew that being an instructor of record during my graduate study would substantively bolster the pedagogy and practice I'd been developing across my ten courses as a TA. The TDP offered the peer support and accountability I needed to write and refine my syllabus. I will certainly use the syllabus design templates when making courses in the future! I also enrolled in the TDP so that I could effectively describe the practices I'd been honing throughout my teaching. The Essentials series taught me the vocabulary and principles that undergird pedagogical practices, like "active learning" and "backward design." In one-on-one consultations, CTL staff helped me develop a teaching statement that engaged these general principles while also emphasizing distinctive aspects of my pedagogy. At the end of the process, I had crafted a teaching portfolio that represented my strengths and interests in teaching, with many thanks owed to the consistent mentorship of CTL staff.

Read the full spotlight: <https://ctl.columbia.edu/graduate-spotlight/hawk/>

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. (Fall 2023, Spring 2024, TDP Sprint 2024)

Ungrading Practices for Graduate Students

This workshop explored the challenges grades may pose to deep learning, and offered some tactics for instructors to provide meaningful feedback while decentering or doing without grades. Facilitators centered graduate

instructors and TAs as those who often face greater institutional constraints when designing assessment plans. (TDP Sprint 2024)

Ways of Knowing

In this interactive session, participants engaged with contemporary educational research indicating that STEM education can devalue ways of knowing that differ from those of the dominant culture, creating particular challenges for historically marginalized communities. The session helped participants apply frameworks for supporting knowledge diversity in multiple learning contexts. (TDP Sprint 2024)

“A huge takeaway from the TDP Sprint was that Columbia has many, many resources available to help teachers succeed. I learned new teaching skills and reflected on my teaching practice, and also learned about how to utilize the different departments and resources available. I also left the TDP Sprint and the Leveraging Learning Spaces seminar with a feeling of community: that I had people who I could reach out to personally with questions, ask for feedback or advice, etc. That community included both other teachers and also the many people at the CTL who I worked with. I left feeling very supported and like I knew who I could turn to as I continued developing my teaching.”

— **Emily Everett**, MFA Student, Playwriting

“One of the most valuable aspects [of the Syllabus from Scratch workshop] was the structure that the workshop, and the accompanying handout, provided in outlining the planning and initial stages required to reach the final product. The workshop provided a road map for crafting the syllabus, one thoughtful step at a time. But equally valuable—and something I hadn’t necessarily expected—was that the workshop highlighted the role for creativity in syllabus design and encouraged prospective instructors to let the syllabus reflect their personality and values. The workshop also helped me begin to think of the syllabus as a living document, a text with which the instructor and students will engage throughout the semester. With my toolkit full of innovative techniques, like Syllabus as Survey, I left the workshop feeling not just prepared but excited to design my University Writing syllabus.”

— **Sarah Wingerter**, MFA Student, Writing

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. Information on our Lounges, focused this year on AI and teaching, is detailed in the “CTL-Wide Accomplishments” section on page 15.

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 2023

Beyond participation: Inclusive Perspectives on Student Engagement and Feedback (Two Parts, CIRTl Network)

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

Moving Forward Together: The Interdependence of Instructor and Student Motivation (Two Parts)

- Ryan Golant, Astronomy
- Kelsey Reeder, Social Work

Pedagogies of Race and Oppression Learning Community: Leveraging Universal Design for Learning (UDL) Toward Anti-Racist Instruction (Three Parts)

- Elizabeth Adetiba, Sociology
- Valeria Spacciante, Classics

Structuring Support: Leveraging Scaffolded Assessments to Promote Student Learning (Two Parts)

- Ana DiGiovanni, Psychology
- Anya Wilkening, Music

Teaching Discomfort: Facilitating Challenging Discussions in the Classroom (Two Parts, CIRTl Network)

- Valerie Hsieh, Physics
- Valeria Spacciante, Classics



Participants in the “Teaching Beyond the Classroom” Learning Community at the American Museum of Natural History.

Student Spotlight



Daniel Sáenz, PhD Student in Latin American and Iberian Cultures; 2024 Presidential Award for Outstanding Teaching

Co-Facilitator of the Pedagogies of Race and Oppression Learning Community

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

I highlighted my efforts to bring about principles of equity, diversity, and inclusion into my classroom and actively respond to recent calls to decolonize curricula and pedagogy, specifically by actively accounting for students from all walks of life, including those who do not fit the traditional mold. I also emphasized the ways in which my teaching practice is rooted in principles drawn from the Universal Design for Learning framework, which I encountered in workshops offered by CTL staff, including Caitlin DeClercq and Ian Althouse. Some of the workshops that helped me think about these perspectives include the “Essentials of Teaching and Learning” series, particularly the modules on Inclusive Learning and Active Learning, as well as “Syllabus from Scratch” and the “What is Student Engagement?” learning community. With these tools under my belt, and in light of my commitment to creating meaningful learning experiences for students from all walks of life, I requested to teach a GS section of Literature Humanities, which was a truly rewarding experience.

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

In my teaching, I strive to minimize the feeling of isolation or invisibility that [undergraduate] students might feel. For instance, I offer incentives for initiating

contact, such as a one-on-one “mid-semester check-in” as part of the course assessment, which affords me the opportunity to discuss students’ progress in the class in a low-stakes environment, while also engaging them outside of class, learning something about them, and demystifying the figure of the college instructor. In doing so, I have been able to identify students who may need additional instructional or institutional support who may have otherwise not brought their struggles to my attention. Students have noted that this strategy, and others, make them feel seen, appreciated, and cared for. This is important for all students, but especially “non-traditional” ones and those from underrepresented or marginalized groups.

You have been the co-facilitator of the Pedagogies of Race and Oppression Learning Community twice and participated in many other CTL programs and opportunities—can you describe a couple of highlights from those experiences and how they have impacted your work?

The Pedagogies of Race and Oppression Learning Community was a wonderful opportunity to meet fellow instructors from a wide range of backgrounds and interests who were also interested in deploying principles of equity, diversity, and inclusion in their teaching practice. Collaborating with them and with my fellow co-facilitators, Tamara Hache (LAIC) and Dominic T. Walker (Sociology), helped me think about my teaching practice more carefully and to learn from the experiences of instructors in different departments. In these Learning Community meetings, we discussed the concept of “difficult knowledge” and how it may be mediated in the classroom, what it means to teach on unceded land, our agency as instructors when teaching a fixed curriculum, and encouraged participants to think about their dream classroom. We also organized a public workshop by Professor Elena FitzPatrick Sifford, titled “Teaching the Canon Critically: Paths Forward for Anti-Oppressive Classrooms,” which helped us think more carefully about our agency as instructors. The guidance provided by Caitlin DeClercq and Celina Chatman Nelson (GSAS Office of Academic Diversity and Inclusion) also helped me grow as a pedagogue, and helped me to better understand principles of scaffolding and backwards design, which have become foundational practices in my own teaching.

Read the full spotlight: <https://ctl.columbia.edu/graduate-spotlight/saenz/>

Spring 2024

*Pedagogies of Race and Oppression Learning Community:
Harnessing Instructor Agency in the Institution (Two Parts)*

- Elizabeth Adetiba, Sociology
- Valeria Spacciante, Classics

*Teaching Across Disciplines: What Can the Grammarian,
the Artist, the Historian, and the Scientist Learn from Each
Other? (Two Parts)*

- Jilian Pizzi, Italian
- McKenzie Sup, Biomedical Engineering

Teaching Beyond the Classroom (Two Parts)

- Jennifer Mead, Astronomy
- Garima Raheja, Earth and Environmental Sciences

CTLgrads Journal Club

The CTLgrads Journal Club for graduate students and postdocs is facilitated by CIRTLL Fellows. 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.

**1,719 Graduate student participants
in CTL workshops**

APPROACHING THE JOB MARKET

Approaching the Job Market Resources

In the 2023–24 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 (133 registrants in 2023–24)
- Introduction to the Diversity Statement (126 registrants in 2023–24)
- Introduction to the Teaching Portfolio (58 registrants in 2023–24)

"I participated in the Practice Teaching sessions with the specific objective of pushing my boundaries and experimenting with new teaching strategies, with the goal of better applying and incorporating them into my standard presenting practices. The facilitators and other students fostered a supportive learning environment where I felt comfortable to explore new teaching methods. While I learned a great deal from my peers about the specific aims I came with, I was also exposed to a wealth of additional useful information by observing and evaluating my peers during their presentations. As a whole, the Practice Teaching sessions gave me an outlet to practice what I had learned in my previous workshops, allowing me to further develop practical teaching skills that I hope will engage audiences more effectively and lead to improved learning."

— **Aidan Jones**, PhD Student, Cellular, Molecular,
and Biomedical Studies

SERVICES

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

Consultations

Graduate students requested 475 one-on-one consultations with the CTL staff to receive support for their teaching and learning needs. Common consultation topics included teaching statements, professional development, preparing for the job market, teaching online, and general teaching-related support.

Practice Teaching

Practice Teaching sessions (formerly known as "Microteaching") offer groups of graduate students and postdocs an opportunity to rehearse teaching practices and get direct feedback and support. Graduate student instructors and postdocs have the ability to register individually or with a small group of peers wishing to do a session together.

**84 graduate student participants in
Practice Teaching sessions**

"I took advantage of the Mid-Course Review (MCR) service because it was an opportunity for me to get feedback from students about particular teaching strategies; through the MCR, I could learn whether the activities I use were resonating with the students and advancing their learning and which strategies were less effective. In addition to getting reflections on teaching tactics I already implemented, the MCR gave the students a chance to voice strategies and activities that they'd like to see implemented. I hope that the MCR experience and the changes I made to the classroom afterwards reinforced the idea that the classroom is a co-created space, that they also can and should take part in shaping the classroom to support their learning."

— **Mekarem Eljamal**, *PhD Student, Urban Planning*

Mid-Course Reviews

The CTL offered Mid-Course Reviews (MCRs) 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.

24 graduate student participants in CTL Mid-Course Reviews

"I'm a big fan of the Teaching Observation—it's a lot of effort for both the observers and the participants, but it was an incredible opportunity to reflect on teaching in the context of how I actually perform it. The Teaching Observation setup (pre-observation reflective discussion, actual session, post-session reflective discussion) forced me to consciously plan student engagement and lesson flexibility as I was crafting the course content, which then primed me to reflect more deeply on the teaching afterwards in addition to making for better day-of instruction."

— **Ava Chen**, *PhD Student, Mechanical Engineering*

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.

37 graduate student participants in CTL Teaching Observations

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, the CIRTLL Fellowship, the Teaching Assessment Fellowship, and hosted a GSAS Fellow in Academic Administration. In addition, it trained and supported a cohort of Teaching Consultants.

84 graduate student fellows and 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 they 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 41 Lead Teaching Fellows as they designed and produced 80 teaching-related workshops across the University. See page 59 for a list of workshops facilitated by Lead Teaching Fellows for their schools and departments. LTFs also participated in a series of interdisciplinary gatherings with the CTL to plan and reflect on their departmental initiatives.



Lead Teaching Fellows at the kick-off event.

2023–2024 Senior Lead Teaching Fellows

Ana DiGiovanni , Psychology	Ryan Golant , Astronomy
Jennifer Mead , Astronomy	Jilian Pizzi , Italian
Garima Raheja , Earth and Environmental Sciences	Kelsey Reeder , Social Work
McKenzie Sup , Biomedical Engineering	Anya Wilkening , Music

2023–2024 Lead Teaching Fellows

Abby Ayers , Biomedical Engineering	Margaret Banks , English and Comparative Literature
Sarah Bedwell , Theatre	Noah Betz-Richman , Philosophy
Sujoy Bhattacharyya , Sustainable Development	Beatrice Bonini , Political Science
Abby Breuker , Classical Studies	Paul Brown , Chemistry
Jessie Burke , Neurobiology and Behavior	Hayley Cohen , Political Science
Ash Cole, Jr. , Social Work	Zachary Deming , Slavic Languages
Claire Dwyer , History	Julie Gan , Ecology, Evolution and Environmental Biology
Kitty Gîrjău , Statistics	Venya Gushchin , Slavic Languages
Joe Hamilton , Philosophy	Karin Isaev , Cellular, Molecular and Biomedical Studies
Darragh Kennedy , Biomedical Engineering	Emma Leidy , Art History and Archaeology
Tao Long , Computer Science	Elena M'Bouroukounda , Architecture
Christian Mott , Psychology	Miriam Nielsen , Earth and Environmental Sciences
Giancarlo Pereira , Physics	Grace Przybyl , Biological Sciences
Mónica Ramírez Bernal , Latin American and Iberian Cultures	Sofia Rosenberg-Klainberg , Nursing
Lauren Shepherd , Music	Alina Shubina , English and Comparative Literature

Bonnie Siegler , Sociology	Gurpreet Singh Hora , Civil Engineering and Engineering Mechanics
Michelle Smith , Epidemiology	Brett Stine , Classics
Jasmine Stone , Neurobiology and Behavior	TK Suh , Visual Arts
Linda Teka , Civil Engineering and Engineering Mechanics	Romney Walker Wood , Germanic Languages
Eunsun Whang , Writing	Sarah Wingerter , Writing
Sinan Yilmaz , Electrical Engineering	

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, MCRs for their TOF peers, practice teaching sessions, and observations of faculty instructors.

2023–2024 Senior Teaching Observation Fellows

Hedwig Lieback , Political Science	Aarushi Shah , Sociomedical Sciences
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2023–2024 Teaching Observation Fellows

A. G. Berman, Writing (School of the Arts)	Elvira Blanco, Latin American and Iberian Cultures
Andrea Dai, Chemistry	Lucia Galaretto, Architecture, Planning and Preservation
Cristina González Rojo, Music	Levi Hord, English and Comparative Literature
Javiera Irribarren-Ortiz, Latin American and Iberian Cultures	Sarah Leonard, Nursing
Young Na, Germanic Languages	Beenish Riaz, Political Science
Adelina Rolea, Earth and Environmental Sciences	Abhi Shah, Neurobiology and Behavior
Ashley Thomas, English and Comparative Literature	Giulia Leila Travaglini, Political Science

CIRTL Fellows

CIRTL Fellows are Columbia doctoral students who serve as an instrumental link between the Center for the Integration of Research, Teaching and Learning (CIRTL) Network and the Columbia community. CIRTL Fellows leverage CIRTL Network resources to support evidence-

based, inclusive teaching and mentorship practices in Columbia's STEM communities by developing independent projects and facilitating the CTLGrads Journal Club.

2023–2024 CIRTL Fellows

Ava Chen , Mechanical Engineering	Fitsum Petros , Mechanical Engineering
Bennett Slibeck , Earth and Environmental Sciences	

“One of the most significant lessons I gained from the [CIRTL fellowship] was the importance of flexibility in a research scope when it comes to educational topics. While undertaking the CIRTL program [...] I learned that it’s perfectly acceptable to redefine the scope of my research while still striving to achieve the overarching goal. This adaptability allowed me to approach the problem I wanted to solve from different angles, ultimately leading me to a more comprehensive understanding and solution. Furthermore, delving into educational information research introduced me to invaluable resources like ERIC [the Education Resources Information Center database] and provided insight into the methodologies employed in educational research. Unlike my usual day-to-day research, this journey offered a refreshing perspective and taught me new approaches to conducting research within the realm of education. Understanding the nuances and intricacies of educational research was enlightening and proved to be both enjoyable and highly educational. Overall, this experience not only expanded my research capabilities but also broadened my understanding of the educational landscape, making it a truly enriching learning journey.”

— **Fitsum Ermias Petros**, PhD Student, Mechanical Engineering

Teaching Assessment Fellows

Teaching Assessment Fellows 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.

2023–2024 Senior Teaching Assessment Fellow and Project Assignment

- **Ali Yalgın** (Theatre and Performance): “Departmental Needs Assessment Instruments” (Partner: Center for Teaching and Learning)

2023–2024 Teaching Assessment Fellows and Project Assignments

- **Ruilin Fan** (English and Comparative Literature): “Generative Artificial Intelligence for Nurses” (Faculty Partner: Meghan Turchioe, School of Nursing)
- **Tianyuan Huang** (East Asian Languages and Cultures): “Transforming Introductory Physics Education at Columbia: Towards an Active Learning Paradigm” (Faculty Partner: Jeremy Dodd, Physics)
- **Manasi Jayakumar** (Psychology): “Columbia Law School Teaching Assistants Program” (Faculty Partner: Sania Anwar, Law School)
- **Nanea Renteria** (Religion): “An Online Platform for Econometrics: Visual Graphical Interactive Simulations” (Faculty Partner: Seyhan Erden, Economics)

Teaching Consultants

Teaching Consultants are trained by the CTL to provide classroom teaching observations, facilitate practice teaching sessions, and run MCRs for graduate students who request these services. In 2023–24, Senior Teaching

Consultants mentored the Teaching Consultant cohort, provided consultations to graduate students, and worked with the CTL on special projects.

2023–2024 Senior Teaching Consultants

Zachary Domach , Religion	Skye Shannon Savage , Germanic Languages
Ben Silver , Psychology	

2023–2024 Teaching Consultants

Laura DiNardo , Italian	Ruilin Fan , English and Comparative Literature
Megan Rivkin , Theatre	John Staunton , Physics
Marissa Swan , Classics	John Thorp , Psychology
Ali Yalgın , Theatre and Performance	

Fellows in Academic Administration

In 2023–24, 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) Fellow. In this capacity, the Fellow tracked and assessed TDP participant activities. She also collaborated with the 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.

2023–24 Teaching Development Program Consultant and Assessment Project

- **Lauren Shepherd**, Department of Music: “TDP Reflection Retreat” (Spring 2024)

CUSTOMIZED PROGRAMS

In 2023–24, the Graduate Student Programs and Services team facilitated the following customized programming.

- The Science of Learning Research Initiative: Embodied Learning in Undergraduate Science (July 13, 2023)
- Fu Foundation School of Engineering and Applied Science: CTL Fellows Panel at SEAS Graduate Student Orientation (August 28, 2023)
- School of the Arts: Overview of Teaching Support Resources (August 29, 2023)
- Department of Statistics: Overview of Teaching Support Resources (August 30, 2023)
- Core Curriculum: Core Preceptor Inclusive Teaching Session (August 31, 2023)
- Department of Physics: Inclusive Teaching in Labs (August 31, 2023)
- Department of French: Diversity Statement Overview (September 15, 2023)
- Berick Center for Student Advising, Columbia Undergraduate Scholars Program: Inclusive Teaching and Mentorship Online (September 18 and 25, 2023)
- School of Social Work: Introduction to the Teaching Development at the CTL, Social Work Doctoral Proseminar (October 25, 2023)
- School of the Arts: CTL Field Trip for MFA Students (December 1, 2023)
- Department of History: Teaching in Times of Stress and Challenge (March 5, 2024)

- Graduate School of Arts and Sciences Office of Academic Diversity and Inclusion: Building a Learner-Centered Syllabus, OADI Summer Research Programs (May 8, 2024)
- Graduate School of Arts and Sciences Office of Academic Diversity and Inclusion: Pedagogies of Race and Oppression Learning Community (multiple sessions throughout the 2023–24 academic year)

Peer Observation Programs

The CTL runs a Peer Observation Program (POP) in 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 2023–24 academic year:

- Core POP Kickoff, October 20, 2023
- Core POP Mid-year Meeting, January 30, 2024

81 workshops led by Lead Teaching Fellows

683 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 2023–24 academic year.

Architecture

- TA in Architecture Forum: Survey and Discussion to Establish Pedagogy Forum (Elena M’Bouroukounda, Fall 2023)
- Architectural History Pedagogy Group (Elena M’Bouroukounda, Spring 2024 Series)

Art History and Archeology

- Art History Orientation (Emma Leidy, Fall 2023)
- Round Table on the Use of AI in Art History Classes (Emma Leidy, Spring 2024)

Biological Sciences

- *Everyday Topic* Explained (Grace Przybyl, Fall 2023)

Biomedical Engineering

- Improving Feedback Strategies for TAs (Darragh Kennedy, Fall 2023)
- Teach Outside the Box: Creativity in Science Learning (Abby Ayers, Fall 2023)
- Practice Teaching for Biomedical Engineers (Darragh Kennedy, Spring 2024)
- TA 101: Crash Course in Teaching (Abby Ayers, Spring 2024)

Chemistry

- Teaching Chemistry for Beyond Chemistry (Paul Brown, Fall 2023)
- Cultivating Growth Rather Than Weeding Out (Paul Brown, Spring 2024)

Civil Engineering and Engineering Mechanics

- Empowering Teaching Assistants: Building Confidence and Reducing Burnout (Gurpreet Singh Hora, Fall 2023)
- Unlocking Synergy: Exploring the Benefits of Collaborative Teaching and Learning (Linda Teka, Fall 2023)
- Mastering Pedagogical Tools: Elevating Your Presentation Skills and Beyond (Linda Teka, Spring 2024)
- Teach Less, Learn More: Unlock the Secrets of Efficient and Effective Classroom Management (Gurpreet Singh Hora, Spring 2024)

Classical Studies

- Incorporating Student Interests in Course Discussion (Abby Breuker, Fall 2023)
- Keep Them Coming Back for More: How to Make Class Both Fun and Rigorous (Abby Breuker, Spring 2024)

Classics

- Writing and Teaching: Balancing Time and Informing Perspective Between the Page and the Classroom (Brett Stine, Fall 2023)
- The Art of the Handout (Brett Stine, Spring 2024)

Computer Science

- Computer Science Teaching Town Hall (Tao Long, Fall 2023)
- How to Design Better Office Hours (Tao Long, Spring 2024)

Earth and Environmental Sciences

- How to Talk About Talking About Climate Change (Miriam Nielsen, Fall 2023)
- Flipped Classrooms: What Works, What Doesn't, and What's Fun (Miriam Nielsen, Spring 2024)

Ecology, Evolution and Environmental Biology

- Grading—Can We Make it Painless? (Julie Gan, Fall 2023)
- How to Explain Difficult Scientific Concepts to Anyone (Julie Gan, Spring 2024)

English and Comparative Literature

- Designing Equitable Groupwork in the Humanities Classroom (Margaret Banks, Fall 2023)
- Teaching Across Disciplines (Alina Shubina, Fall 2023)
- Teaching in a Crisis (Margaret Banks and Alina Shubina, Spring 2024)
- University Writing Workshop (Alina Shubina and Margaret Banks, Spring 2024)

Electrical Engineering

- How to Create a Syllabus (Sinan Yilmaz, Fall 2023)
- Assessment and Group Work in STEM (Sinan Yilmaz, Spring 2024)

Epidemiology

- Improvements to the Teaching Apprentice Experience (Michelle Smith, Fall 2023)
- Resources for Public Health Communication (Michelle Smith, Spring 2024)

Germanic Languages

- Pedagogies of Discomfort in the Language Classroom (Romney Walker Wood, Fall 2023)
- Balancing the Scales: Exploring Pros and Cons of AI in Second Language Learning (Mónica Ramírez Bernal, Latin American and Iberian Cultures, Fall 2023)
- Teaching Social Issues Through Film (Romney Walker Wood and Mónica Ramírez Bernal, Latin American and Iberian Cultures, Spring 2024)
- Practice Teaching Event (Romney Walker Wood and Mónica Ramírez Bernal, Latin American and Iberian Cultures, Spring 2024)

History

- Learning to Teach Through Community: Orientation (Claire Dwyer, Fall 2023)
- Teaching During Global Crisis: A Guide to Navigating Israel-Palestine in the Classroom (Claire Dwyer, Spring 2024)

Latin American and Iberian Cultures

- Balancing the Scales: Exploring Pros and Cons of AI in Second Language Learning (Mónica Ramírez Bernal, Fall 2023)
- Teaching Social Issues Through Film (Mónica Ramírez Bernal, LAIC and Romney Walker Wood, Germanic Languages, Spring 2024)
- Practice Teaching Event (Mónica Ramírez Bernal, LAIC and Romney Walker Wood, Germanic Languages, Spring 2024)

Music

- Teaching the Fundamentals of Music Across Disciplines (Lauren Shepherd, Fall 2023)
- Crafting Assignments to Promote Grading Equity (Lauren Shepherd, Spring 2024)

Neurobiology and Behavior

- Navigating the Mentor-Mentee Relationship as Mentor and Mentee Pt. 1 (Jess Burke, Fall 2023)
- Navigating the Mentor-Mentee Relationship as Mentor and Mentee Pt. 2 (Jasmine Stone, Fall 2023)
- Gauging Student, Audience, and Mentee Understanding in Real Time (Jasmine Stone, Spring 2024)
- Preparing to Teach: Setting Goals and Expectations in the Lab and the Classroom (Jess Burke, Spring 2024)

Nursing

- CUSON TA Orientation (Sofia Rosenberg-Klainberg, Fall 2023)
- From TA to Teaching: A Panel Discussion with CUSON Faculty Who Began as TAs (Sofia Rosenberg-Klainberg, Spring 2024)

Philosophy

- Holding Effective Office Hours (Noah Betz-Richman, Fall 2023)
- Delivering an Engaging Lecture (Joe Hamilton, Fall 2023)
- Running a Successful Recitation Section (Joe Hamilton, Spring 2024)
- Design Your Dream Philosophy Syllabus (Noah Betz-Richman, Spring 2024)

Physics

- Physics Microteaching (Giancarlo Pereira, Fall 2023)
- So, What Do You Think? (Giancarlo Pereira, Spring 2024)

Political Science

- Efficient and Effective Comments on Student Writing (Hayley Cohen, Fall 2023)
- Teaching to All Levels: Dealing with Heterogeneity within the Classroom (Beatrice Bonini, Fall 2023)
- Marketing Teaching Skills in the Private Sector Job Market (Beatrice Bonini, Spring 2024)
- Marketing Teaching Skills on the Academic Job Market (Hayley Cohen, Spring 2024)

Psychology

- Assessments in the Time of ChatGPT (Christian Mott, Fall 2023)
- Teaching Mixed Ability Classrooms (Christian Mott, Spring 2024)

Slavic Languages

- Teaching with a Supervisor: Best Practices for Humanities TAs and Graduate Instructors (Venya Gushchin, Fall 2023)
- Metalinguistic Practices in Language Instruction: Strategies for Discussing Language in the Language Classroom (Zachary Deming, Fall 2023)
- Teaching Russian through Theatre (Venya Gushchin, Spring 2024)
- Affect and Effect: Responsivity and Self-Regulation in the Classroom (Zachary Deming, Spring 2024)

Social Work

- CTL Sparknotes (Ashley Cole, Jr., Fall 2023)

Sociology

- The Fun Factor: Turning Teaching into a Joyful Journey (Bonnie Siegler, Fall 2023)
- Equity and Grading: A Practical Guide (Bonnie Siegler, Spring 2024)

Statistics

- Learning to Learn in STEM Programs (Kitty Gîrjău, Fall 2023)
- Teaching with AI in STEM Programs (Kitty Gîrjău, Spring 2024)

Sustainable Development (School of International and Public Affairs)

- Facilitating Active Learning: A Toolkit for Teaching Assistants (Sujoy Bhattacharyya, Fall 2023)

Systems Biology

- Engaging Your Audience (Karin Isaev, Fall 2023)
- The Power of Questions: Improving Academic Engagement (Karin Isaev, Spring 2024)

Theatre (School of the Arts)

- Constructive Criticism and the Four Agreements (Sarah Bedwell, Fall 2023)
- From Artists to Educators (Sarah Bedwell, Spring 2024)

Visual Arts (School of the Arts)

- Visual Arts TA Gathering (Tk Suh, Fall 2023)

Writing (School of the Arts)

- Self-Reflection and Your Theory of Practice (Eunsun Whang, Fall 2023)
- Learning Through Discussion (Sarah Wingerter, Fall 2023)
- Pedagogy Conversations with Alan Gilbert (Eunsun Whang, Spring 2024)
- Keep Your Cool When Things Get HOT: Navigating Heated, Offensive, and Tense Moments in the Classroom (Sarah Wingerter, Spring 2024)

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.

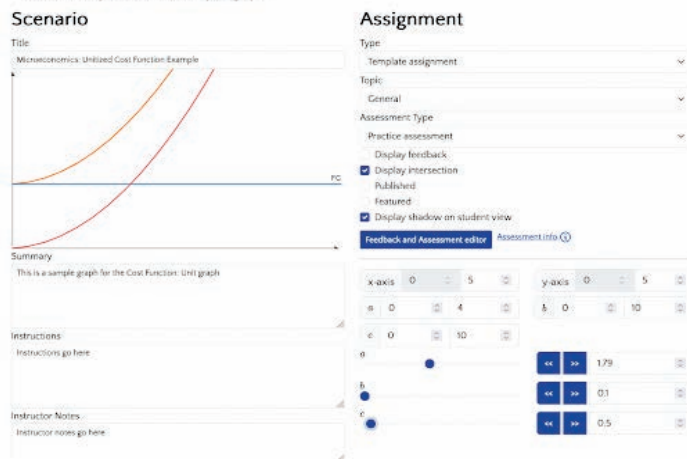
SUPPORT FOR PROVOST'S FUNDED TEACHING AND LEARNING GRANT PROJECTS

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 24 for the full list of 2023-24 Provost's Funded Teaching and Learning Grant projects.

Below are highlighted projects from the Instructional Technologies group in the 2023-24 academic year.

Cost Functions: Unit

Add and modify the information of your graph.



The new Microeconomics graphs for EconPractice allow users to set the ranges for both the grid-box and variable sliders. Changes are seen in real time.

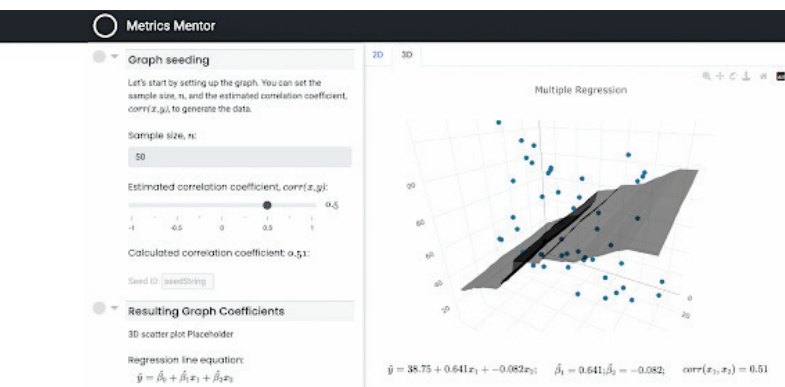
EconPractice for Microeconomics

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 2023-24, the CTL completed development of the assignment builder feature for instructors to create assignments consisting of both traditional graph-based EconPractice questions, and new sets of graph types grounded in microeconomics concepts, that will allow the platform to be used in microeconomics courses.

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

MetricsMentor: An Online Platform for Econometrics

CTL staff collaborated with Professor Seyhan Erden, Lecturer in the Discipline of Economics, on her project MetricsMentor, an online visual graphical interactive platform focused on the mentoring of Econometrics. Work included the production of four econometrics simulations that will be used in or in preparation for her classes. The four simulations cover "Hypothesis Testing for Population Slope," "Omitted Variable Bias," "Standard Errors Problems," and "Non-linear Regression." Every simulation will include visual and adaptive two- and three-dimensional graphs that respond to variable



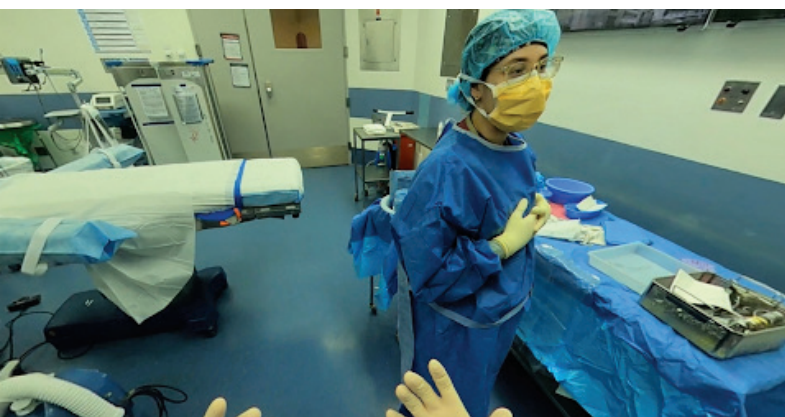
A demonstration of MetricsMentor's "Simulation 1: Hypothesis Testing for Population Slope."

changes. Learners will go through a guided activity to set or modify graph parameters and produce graph outcomes. Learners will then evaluate and validate their conclusion and understanding through a set of quizzes embedded in the simulation itself.

URL: <https://metricsmentor.ctl.columbia.edu>

OR360: ORientation—Using Virtual Reality to Improve Medical Students' Preparedness in the Operating Room

CTL staff worked with Catherine McManus, Assistant Professor of Surgery, on her ORientation project, which aims to improve Columbia medical students' preparedness to participate in high-quality, team-based care in the surgical environment by introducing them to this environment through a web application (OR360) that will deploy interactive 360° images, videos (both 360° and conventional), and virtual walkthroughs. The 360° images will offer exploratory interactivity in the form of "hotspots," which are indicated areas within the 360° image that, when clicked, bring up additional content, information, and resources for the students.



A still from the interactive prototype of ORientation showing a 360° image of a CUIMC operating room.

A virtual reality (OR/VR) simulation module will also be developed through a concurrent grant project in conjunction with CUIT Emerging Technologies.

Mediathread Accessibility

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 2023-24, the CTL development team collaborated with Stanford University's development team to continue making improvements to Mediathread's accessibility using a report compiled by Stanford University. This effort was necessary for Mediathread to conform with Digital Accessibility guidelines. Mediathread was used in 62 courses this year.

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

MASSIVE OPEN ONLINE COURSES (MOOCS)

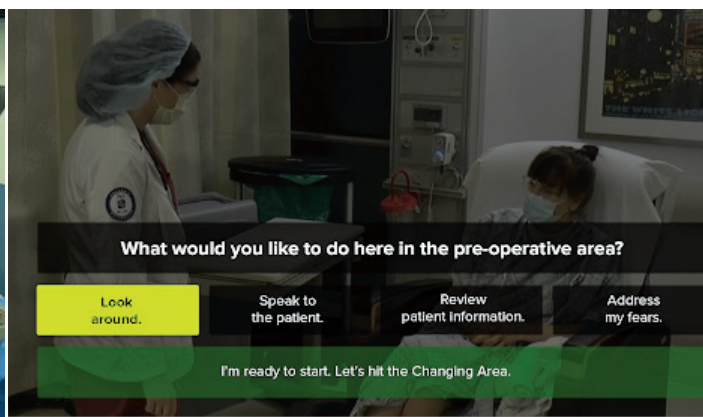
The CTL provides comprehensive production and media support for the design, creation, and delivery of MOOCs. The following MOOC was launched in 2023-24.

Public Health Advocacy Academy

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

Heather Krasna, Adjunct Assistant Professor of Health Policy and Management

The CTL worked with Terry McGovern and Heather Krasna at Columbia's Mailman School of Public Health to launch "Public Health Advocacy Academy." The course aims to equip public health students with the skills,



A concept image for ORientation depicting an interactive prompt for students to progress through the material.



Bob Fullilove, Professor of Sociomedical Sciences and civil rights activist, serves as an expert speaker in the Public Health Advocacy Academy MOOC.



Robert Fullilove

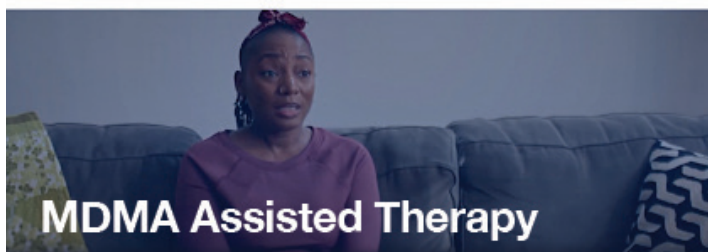
PROFESSOR
SOCIO MEDICAL SCIENCES
ASSOCIATE DEAN, COMMUNITY AND MINORITY AFFAIRS
COLUMBIA MAILMAN SCHOOL OF PUBLIC HEALTH

strategies, and techniques to design effective advocacy campaigns, to turn research and evidence into law, policy, and funding. The CTL provided extensive video support, including the production of 85 videos presenting insights from 17 expert speakers who shared their knowledge and practical experience in advocacy work.

URL: <https://www.edx.org/learn/public-health/columbia-university-public-health-advocacy-academy-1>

MEDIA PRODUCTIONS

The media team produces impactful videos for in-person and online courses, teaching resources, 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.



MDMA-assisted therapy session videos were integrated into the Spring 2024 curriculum of "Introduction to MDMA-Assisted Therapy."

Media Projects in 2023–24

MDMA-Assisted Therapy Simulation Videos for Social Work

The CTL media team collaborated closely with Social Work faculty members Heidi Allen and Amy Werman, and Psychedelic Therapy Program Manager and Lecturer Brook Stott, to produce MDMA-assisted therapy simulation videos for their course "Introduction to MDMA-Assisted Therapy." Four training videos were integrated into the Spring 2024 curriculum.

Data Science for Political Analytics

Professor of Political Science Gregory Warwo's innovative course design project aims to enhance project-based learning by offering students access to the L2 voter file data set and a suite of videos that walk students through the fundamentals of Data Science using the R language. Professor Wawro worked closely with his TAs and the CTL media team to produce 14 videos for his course.

Healthcare Management, Design, and Strategy

Professors Taylor Sewell, faculty at Vagelos College of Physicians and Surgeons, and Carri Chan and Peter Tollman, faculty at Columbia Business School, worked with the CTL media team to produce 21 lecture videos for their project-based interdisciplinary course "Consulting Practicum: Healthcare Management, Design, and Strategy." Read more about the project in the faculty spotlight on page 28.

Dead Ideas in Teaching and Learning **Podcast Series**

The media team worked closely with CTL Executive Director and host Catherine Ross to produce seasons 7 and 8 of the *Dead Ideas In Teaching and Learning* podcast series. Read more about the podcast on page 18.

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

- Celebration of Teaching and Learning Symposium in-person and online webinars, and video montage, “Celebrating 10 Years of Provost Funded Teaching and Learning Grants”
- Provost Conversations on Online Learning with Jeff Rubenstein, Education Cloud Product Manager at Google, moderated by Amanda Irvin

TECHNOLOGY PLATFORMS AND SUPPORT

The Instructional Technologies group made significant upgrades in their tech infrastructure with the goal of improving security and proactively preventing security breaches by malicious third-party bots. The group also continued to perform software development work on digital accessibility in the project process.

This year, the team migrated the majority of the cloud-hosted web applications using Amazon Web Services (AWS) Load Balancer and AWS Web Application Firewall. This was crucial for maintaining secure and reliable online services. The AWS Load Balancer ensures that CTL’s web applications remain available and perform well by spreading incoming traffic across multiple servers or locations.

Additionally, the AWS Web Application Firewall provides an extra layer of security protection, checking and filtering incoming traffic to the web applications. The Firewall stops hacking and unauthorized access, based on a list of AWS managed security rules to fend off suspicious activities. This combination keeps the CTL’s applications running smoothly and ensures they meet high security standards and safeguard user data.

With this year’s infrastructure upgrades, applications running in the CTL’s infrastructure comply with several important regulatory and security standards: PCI DSS compliance; HIPAA compliance; SOC1, SOC2, and SOC3 compliance; ISO/IEC 27001 compliance; FedRAMP compliance.

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

- Dach, E., David, L., Van der Made, J., Pope, M., Chabeda, J., Brown, A., Foo, J. C., and Yip, N. Y. (2023). Are Showerhead Filters Retailed Online a Scam? Investigating Water Quality Claims Through a Course-Based Research Experience. *Environmental Engineering Science*, 40(10), 414–425.
- Petitti, R., Irvin, A., and Kachani, S. (2024). Disembroiling HOT Moments in the Classroom. *Inside Higher Ed*.

Conference Presentations and Invited Workshops and Discussions

- Althouse, I. (2024, March). *Critical AI Literacy and Higher Education*. [Invited Workshop] Part of the Expert Educators Seminar Series. City University of Hong Kong (CityU), Hong Kong, China.
- DeClercq, C. (2023, August). *Active Learning: Embodied, Emplaced, Engaged*. [Invited Keynote] Bridgewater State University, Faculty Active Learning Institute.
- DeClercq, C. (2024, June). *Please Advise: Launching and Learning from a Graduate Student Advisory Committee*. Graduate Career Consortium Annual Conference, Pittsburgh, PA 2024.
- Hentrich, N. (2024, March). *Teaching Media Studies in the Age of AI: Challenges and Opportunities*. Boston, MA.
- Irvin, A. (2023, October). *Don't Let the Urgent Overshadow the Important: How Learning Works in the Age of AI*. Part of the Expert Educators Seminar Series. City University of Hong Kong (CityU), Hong Kong, China.
- Klaf, S. (2024, May). *Transparent Assignment and Rubric Design in the Age of AI*. School of Visual Arts, New York.
- Petitti, R. (2024, March). *UMass Amherst Comp/Rhet Alumni Connection Panel*. [Invited Panelist] University of Massachusetts Amherst, Amherst, MA.
- Phillipson, M. (2023, November). *Building Up Credit: Behind the Scenes of Teaching Certificate Programs*. 48th Annual POD Network Conference, Pittsburgh, PA.

- Phillipson, M. (2023, November). *Emergent Forms of Arts and Humanities Teaching*. 48th Annual POD Network Conference, Pittsburgh, PA.
- Ptak, C., Kingon, A. (2023, November). *Understanding and Supporting the Needs of Clinical Educators*. 48th Annual POD Network Conference, Pittsburgh, PA.
- Ross, C. (2023, November). *Grading Practices in Higher Education*. Brearley School (Online).
- Schroering, A. (2023, November). *Climate Justice Across the Curriculum*. 48th Annual POD Network Conference, Pittsburgh, PA.
- Schroering, A. (2023, November). *What Can an Educational Developer Do About the Climate Crisis?*. 48th Annual POD Network Conference, Pittsburgh, PA.
- Schroering, A. (2023, November). *How Do We Know? Cultivating Diverse Ways of Knowing in STEM*. 48th Annual POD Network Conference, Pittsburgh, PA.

Representation at Conferences and Events

- 48th Annual POD Network Conference, *Envisioning the Future: Developing Equitable Opportunities for Success*. November 16–19, 2023; Pittsburgh, PA; November 14–18, 2023 (Online).
- AAC&U Teaching with AI workshop Series. March 11, March 18, April 1, and April 8, 2024 (Online).
- CTL Ivy+ Network meeting. May 9–10, 2023; hosted by Dartmouth Center for the Advancement of Learning, Hanover, NH.
- Graduate Career Consortium Annual Conference. *Love the Work You Do, Innovate the Work You Love*. June 25–28, 2024; Philadelphia, PA.
- Climate Wayfinding Facilitator Training. June 2–6, 2024; Rhinebeck, NY.
- CIMER. Entering Mentoring Facilitator Training. July 23–26, 2023. Madison, WI.
- Barnard Center for Engaged Pedagogy. *Everyone Can Teach Climate Symposium*. April 3, 2024. New York, NY.
- The Grading Conference. June 13–15, 2024 (Online).

- Annual Conference of the American Society for Engineering Education *The Future of Engineering Education*. June 23–26, 2024. Portland, OR.
- Society for Cinema and Media Studies. March 14–17, 2024. Boston, MA.

Columbia University Committee Work

- Chan, D.
 - CUIT Data Governance Working Group
 - CUIT IT Leadership Council (ITLC)
 - CTL/CUIT AI Working Group
- Foo, J. C.
 - CC-SEAS Academic Integrity Working Group
 - SEAS Committee on Instruction (COI)
 - Columbia College and General Studies Committee on Science Instruction (COSI)
- Hentrich, N.
 - Academic Technologies Leadership Group (ATLG)
 - Ally Working Group
- Irvin, A.
 - Provost's Working Group on Generative AI
 - University Committee to Address Bias
 - Educational Resource Council, CUIMC
 - Middle States Re-accreditation Standard 3 Working Group
- Kingon, A.
 - CUIMC Education Resource Committee (ERC)
 - CUIMC Education Technology Advisory Committee (ETAC)
 - VP&S Curriculum Re-Imagining Creative Workgroup
- Klaf, S.
 - Directors of Undergraduate Studies (DUS), Arts and Sciences
- Petitti, R.
 - Diversity Officers
- Ross, C.
 - Provost's Advisory Committee on the Libraries (PCAL) Education Working Group Subcommittee
 - Senate Education Committee
 - Steering Committee for Middle States Re-accreditation and Co-chair for Standard 5 Working Group

External Committees and Boards

- Althouse, I.
 - CENTRO (Mexico City, Mexico), Consultant on teaching development initiative for instructors
 - City University of Hong Kong (CityU), Teaching Development Grant Review Committee
 - CTL Ivy+ for Grads, Monthly meeting co-convenor and administrator
- Foo, J. C.
 - City University of Hong Kong (CityU) Teaching Development Grant Review Committee
- Hentrich, N.
 - Critical Media Pedagogies Scholarly Interest Group, Society for Cinema and Media Studies, Steering Committee
- Irvin, A.
 - *College Teaching*, Consulting Editor
 - *The Scholarly Teacher*, Editorial Review Board
 - City University of Hong Kong (CityU) Teaching Development Grant Review Committee
- Kim, J.
 - City University of Hong Kong (CityU) Teaching Development Grant Review Committee
- Klaf, S.
 - City University of Hong Kong (CityU) Teaching Development Grant Review Committee
- Petitti, R.
 - POD Ethical Guidelines Ad Hoc Committee Member
- Phillipson, M.
 - Arts and Humanities Special Interest Group, POD Network, Co-chair
- Ross, C.
 - Ivy+ Directors: Monthly Group Meetings
- Schroering, A.
 - Earth Centered Pedagogy Special Interest Group, POD Network, Chair

Appendix A:

CTL Leadership and Staff

Leadership Council

Soulaymane Kachani , Chair, Senior Vice Provost	Catherine Ross , Executive Director, Center for Teaching and Learning
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
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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 , Senior Assistant Director, Science and Engineering
Jamie Kim , Assistant Director	Rebecca Petitti , Assistant Director
Aurora Collado , Learning Designer	Alyssa Famolari , Learning Designer
Nicole Hentrich , Senior 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
Alexis Cho , 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

Danny Chan , Associate Director	Stephanie Ogden , Associate Director
Vincent Aliberto , Senior Media Producer	Devon Anirudh , Development Operations Engineer
Michael Brown , Assistant Media Producer	Frank DeStefano , Assistant Media Producer
Natalia Dittren , Associate Programmer	Sean Dundas , Senior 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
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Appendix B:

2023-24 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	Sarah Cole Dean, School of the Arts; Parr Professor of English and Comparative Literature
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	Clara Lapiner Assistant Vice President of Faculty Professional Development, Diversity and Inclusion, Columbia University Irving Medical Center
Monica Lypson Rolf H. Scholdager Professor of Medicine; Vice Dean for Education, Columbia University Irving Medical Center	Ellen Meier Professor of Practice, Teachers College; Director of the Center for Technology and School Change
Janet Metcalfe Professor of Psychology, Department of Psychology, Faculty of Arts and Sciences	Dennis Mitchell 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 William R. Kenan, Jr. Professor of Biological Sciences, Professor of Chemistry and of Pathology and Cell Biology; Chair, Department of Biological 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, School of Arts and Sciences; Program Director, Political Analytics, School of Professional Studies

Appendix C:

Data Summary of AY 2023-24 Programs and Services

1. Unique Individuals Served by the CTL

By University Status/Affiliation

Graduate students	1,424
Faculty	1,518
Administrators and university staff	459
Postdocs	83
Research scientists	36
Undergraduate students	55
Alumni, Retirees, Other	21
Total	3,596

By School

Arts and Sciences	1,328
Fu Foundation School of Engineering and Applied Science	399
Vagelos College of Physicians and Surgeons	418
Mailman School of Public Health	202
College of Dental Medicine	21
School of Nursing	104
Columbia Business School	118
Columbia Law School	80
Graduate School of Journalism	26
School of Architecture, Planning and Preservation	55
School of International and Public Affairs	110
School of Social Work	118
The Climate School	27
School of Professional Studies	157
Teachers College	76
Barnard College	107
Jewish Theological Seminary	2

Union Theological Seminary	4
Centers and institutes	60
Other units	184
Total Columbia-affiliated individuals	3,596
Total external visitors	39
Total unique individuals served	3,635

2. CTL Interactions

By University Status/Affiliation

Faculty	3,673
Graduate students	5,098
Administrators and university staff	968
Postdocs	179
Research scientists	59
Undergraduate students	66
Alumni, Retirees, other	37
Total	10,080

By School

Arts and Sciences	4,620
Fu Foundation School of Engineering and Applied Science	1,112
Vagelos College of Physicians and Surgeons	1,157
Mailman School of Public Health	392
College of Dental Medicine	40
School of Nursing	270
Columbia Business School	192
Columbia Law School	187
Graduate School of Journalism	63
School of Architecture, Planning and Preservation	218
School of International and Public Affairs	235
School of Social Work	315
The Climate School	72
School of Professional Studies	239
Teachers College	194
Barnard College	283

Jewish Theological Seminary	3
Union Theological Seminary	13
Centers and institutes	117
Other units	358
Total Columbia-affiliated interactions	10,080
Total external visitor interactions	49
Total interactions	10,129

3. Programs and Events

Client Interactions by Program Type

Workshops	2,475
University-wide events	399
Self-paced courses	1,342
Institutes	163
Outreach events	521
Total program and event interactions	4,900

4. Services

Client Interactions by Service Type

Project consultations	1,289
Teaching and course consultations	630
CourseWorks consultations	374
Professional development consultations	750
Other technology support	260
Total service interactions	3,303

Center for Teaching and Learning

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