

TILT Annual Report

Fall 2019 – Spring 2020

Mission

[The Institute for Learning and Teaching](#) (TILT) helps students, faculty, and staff use research-based learning and teaching methods to support academic achievement, equity, and post-graduation success for all CSU students.

Structure

Our programs integrate peer education, undergraduate research, course redesigns, curricular alignment, educational technologies, and teaching-related professional development. By connecting these components, we help make robust learning the hallmark of a CSU education.

Vision

Through 2023, we will:

- Support large-enrollment, high-DFW course redesigns that use educational technologies to free class time for research-based instructional approaches;
- Incorporate undergraduate peer learning assistants into targeted courses and provide a tiered model of peer educator support in other courses;
- Redesign our professional development in hybrid format, align offerings with our Teaching Effectiveness Framework, and integrate learning analytics training and resources;
- Engage at least 25% of CSU instructors in research-based professional development;
- With campus partners, build a Diverse Peer Educator Network for CSU peer educators of color and help all interested to pursue undergraduate research roles and nationally competitive scholarships;
- Address equity in program assessments and measure short-term indicators likely to align with long-term improvements in key student success metrics (e.g., course success rates).

By the Numbers

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| <ul style="list-style-type: none">• 2,100 enrollments supported by peer learning assistants (LAs)• + 7% course success rate in LA-supported sections• 9,639 student visits to tutoring• 89% course success rate, 10+ tutoring visits; 80% any tutoring visits; 77%, no tutoring visits• 972 academic success workshop participants | <ul style="list-style-type: none">• 863 TILT-supported undergraduate researchers• 26 nationally competitive scholarship awardees• 39 instructors completed at least one Best Practices in Teaching module• 3 college leadership teams and 10-16 departments engaged with Teaching Effectiveness Framework and 300 faculty & others attended workshops• 479 graduate teaching assistants (GTAs) trained | <ul style="list-style-type: none">• 321 workshop & short course participants• 59 workshops, webinars, & program adaptations to support remote teaching, SP20• 405 hours staffing the Keep Teaching help chat, phone line and ticketing system• 360 students (75% of typical number) participated in the virtual SP20 Celebrate Undergraduate Research and Creativity symposium |
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Student Support Program Highlights

Undergraduate Research and Artistry

- 323 students participated in TILT's [Honors Undergraduate Research Scholars](#) (HURS) program: received training and support to obtain undergraduate research assistant positions, often leading to prestigious scholarships – 44% of recent UG NSF GRFP recipients and 43% of Goldwater Scholars are HURS alumni
- 59 students participated in 1 of 7 funded [College of Liberal Arts Research Academies](#)
- 10th anniversary edition of the [Journal of Undergraduate Research](#) published

Nationally Competitive Scholarships and Fellowships

- \$1.15M in total scholarship dollars awarded:
 - 2 [Astronaut](#) (first time in CSU history)
 - 2 [Truman](#) (with only 7 of 55 institutions receiving 2 awards, of 773 applicants)
 - 2 [Boren](#) (of 3 CSU applicants; only 3 CSU Boren Scholars previously in CSU history)

Peer Educator Programs

All peer educator programs moved to virtual formats in SP20 in response to COVID-19:

- [Learning Assistants](#) provided in-class support for active learning and led study groups outside class time: ~2,400 LIFE 102 students, FA19 - SP20, + CHEM 111 students ~350 students, SP20
- [Tutoring](#) for 26 courses in Biology, Chemistry, Math, and Physics, Sun. – Th., 5 – 10 PM
- [Academic Success Workshops](#) 2 x week on 27 different topics (e.g., study habits, time management skills, and holistic self-care), plus requested workshops for 251 more students
- [Study Group](#) facilitators supported 12 courses and recorded 1,391 student visits in AY 19-20
- Provided extensive [learning resources](#)
- Expanded Peer-to-peer academic coaching to support students in SP20 remote learning; encouraged use of [study approaches grounded in the science of learning](#)
- Began exploring proven Supplemental Instruction peer education approach to build a tiered support model tailored to levels of faculty involvement with peer educators

Catalyst Learning Community

- Second cohort of the [Catalyst Learning Community](#) (14 students from underrepresented backgrounds) completed their first Catalyst year: students served as Learning Assistants in FA19 (supporting 534 enrollments) and completed an undergraduate research assistant (URA) course in SP20 in anticipation of serving as URAs in FA20 with funding through TILT

Academic Integrity Program

- Over 2,000 students completed game-based Academic Integrity Tutorial
- 72% of all academic misconduct cases in AY 2019-2020 resolved via Documentation Only diversion process, reducing reportable academic misconduct records to outside entities such as graduate schools, governmental agencies, etc.

Faculty Support Program Highlights

Teaching Effectiveness Framework

- Research and scholarship on learning and teaching ground all aspects
- Seven domains provide a [comprehensive framework](#) for cultivating and evaluating teaching effectiveness and for designing professional development offerings
- [Extensive resources](#) support defining and pursuing teaching effectiveness goals
- At least one college, three departments, and three other units have adopted the Teaching Effectiveness Framework for goal setting and evaluation; others are piloting

Best Practices in Teaching Hybrid Course

- Faculty learn, apply, and reflect on outcomes of research-based instructional approaches aligned with TILT's Teaching Effectiveness Framework
- 12 modules cover a broad set of foundational teaching-related topics, from inclusive pedagogy to constructing assignments, with 6 modules built, + 3 by 9/1/20, + 3 by 2/1/20
- Facilitated discussions promote meaningful exchanges and community among instructors
- 39 instructors, who collectively taught more than 7,000 enrollments, drafted 129 high-quality reflections and completed one or more of six modules offered in AY19-20

[Accelerating Adoption of Adaptive Courseware Grant Project](#)

- Association of Public & Land-Grant Universities (APLU) funded at \$515,000 (7/16 – 6/20)
- 41 instructors integrated adaptive courseware, which uses artificial intelligence to tailor problems, activities, and help to specific students: 15,100 enrollments, 126 sections, 24 courses
- APLU scaling goal of 15-20% of enrollments (12,291 – 16,888) met early in year three
- 31 large-enrollment instructors integrated active learning, with 38 peer learning assistants

Graduate Teaching Assistants

- Graduate teaching assistants (GTAs): 479 trained; CSU GTAs teach 41,720 enrollments/year
- Active learning used to model research-based instructional approaches introduced
- 229 active participants in [Graduate Teaching Certificate Program](#)

Extensive Teaching Support Programs

- 321 faculty and GTAs participated in professional development workshops and short courses
- [Master Teacher Initiative](#) Coordinators in all nine colleges provided weekly teaching advice and monthly activities to instructors in their colleges
- 62 faculty took part in [focus groups](#) that replaced 2020 Summer Conference; keynote speakers will give FA20 webinars; 888 attended the 2020 Professional Development Institute
- 20 faculty and GTAs added science of learning activities, measured learning outcome mastery
- 12 faculty redesigned courses to integrate [service learning](#)
- [Unizin](#) projects, educational technology, learning analytics, and low-/no-cost etexts supported
- 12 new online courses built, 13 enhanced; 25 online instructors supported
- Course redesigns, curricular revisions, and teaching-related assessments facilitated
- Collaborated with Student Diversity Programs and Services to integrate information on accommodations into faculty professional development offerings and resources

Support for Campus Partners and Leadership

Selected Campus Leadership and Partner Initiatives Supported

- **VPFA initiative** to support departments in **improved evaluation of teaching effectiveness**: developed resource materials for departments, from [guidance in designing approaches to evaluate teaching effectiveness](#) to sample department code language on evaluative criteria
- **VPUA First Four Weeks initiative**: assisted with planning content and delivery, logistics; developed approach to revise and scale online version
- **Provost's Digital Learning Initiative grant**: collaborated to draft and disseminate RFP, organize proposal review process, and provide instructional design support for funded projects
- **Academic Program Review**: reviewed and discussed departments' program review documents; provided pre- and post-review support (e.g., for curricular revisions, assessment)
- **Provost's Ethics Colloquium**: collaborated with partners to organize [Beyond Partisan Politics: Bridging Divides by Overcoming Our Echo Chambers](#) and to support [departmental events](#)
- **Colorado Regional Digital Learning Symposium**: collaborated to draft RFP, review proposals, plan event (postponed to FA20 due to COVID-19)
- **VP for Diversity Faculty Institute for Inclusive Excellence**: collaborated to develop content and facilitation plans, assisted with logistics, mentoring of faculty
- **VP for Diversity and Graduate School**: collaborated on [successful CSU Race, Bias, and Equity Initiative proposal](#) to scale inclusive excellence training for graduate teaching assistants
- **Keep Teaching/Keep Learning efforts**, SP20: collaborated with ACNS and CSU Online to support remote course delivery: workshops, webinars, resources, consults (680 work sessions)
- **Undergraduate & Graduate Teaching Continuity Teams** supporting online and hybrid instruction for FA20: organized VPUA-initiated [Summer Webinar series](#); converted webinars to on-demand online resources; drafted plans to scale four SUM20 online courses to 200 instructors each
- **ACNS**: collaborated on Canvas workshops and **educational technology initiatives**
- **CSU Online**: collaborated on **online course builds, faculty professional development**
- **Center for Mindfulness**: provided campus f2f and virtual **mindfulness workshops, resources**
- **Central Canvas Team, University Testing Center, CSU Online**: collaborated to **guide proctoring**
- **Video, presentation, and facilitation support**: completed various projects, e.g., [Curricular Analytics Toolset video](#) for the Association of Public & Land-Grant Universities, [CSU's Inclusive Pedagogy Online video](#), and Fall Forum learning analytics workshop
- **Collaborative for Student Achievement**: [U-Turn](#) academic success event
- **Student Resolution Center**: collaborated on **Academic Integrity Program resources**
- **Talent Development**: participated on the **Bridge Department Administrators Team**

CSU and External Committees, Groups, Boards and Other Entities

Collectively, TILT colleagues serve on 30 CSU and external groups, including:

- Classroom Review Board
- Council of Research Associate Deans
- Faculty Council Committee on Teaching and Learning
- Honors College Implementation Committee
- Learning Analytics Steering Committee
- [MURALS](#) Planning Committee
- Provost Search Committee
- [Provost's Council for Engagement](#)
- Student Success Assessment and Implementation Committee
- Student Success Initiatives Technology Middle Group
- [Unizin](#) Board, Unizin Teaching & Learning Advisory Group and several subcommittees
- Web Accessibility Committee

Selected Presentations, Publications, and Professional Development

Awards

- Top 10 presentation and publication for Leadership in Higher Education Conference 2019, “Developing and Evaluating Teaching Effectiveness”
- [Best in Research Track Award at OLC Innovate 2020](#) for Buchan, T., Kruse, S., & Todd, J., (2020, April) Enhancing Instruction Through The Use Of Adaptive Courseware And Research-Based Teaching Practices. Paper presented at OLC Innovate 2020, Chicago, IL.

Publications

- Blase, C.M., Rouault, B.K., Zoller, M.B., Luff, E.J., Lauterbach, B.N., Brown, M.A., Storsberg, J., and Schmidt, C. Individualizing Periods of Commercial Exclusivity to Control Pricing for Drugs and Biologics. *Amer J Immunol*, 2019, 15(1) 19-21. (This paper includes 5 undergraduate authors and is a product of OURA’s Academy of Pharmaceutical Industry Scholars).
- Brown, M.A., Alshiraihi, I., Hassell, K., Lanning, S. Clinical Sciences – Leading the Way in Competency-Based Biomedical Education. *Vet Sci*, 2020, 7(1) 23-26.
- Brown, M.A., Blase, C., Storsberg, J., Schmidt, C. Methods for Universal Authentication of Medical Devices. *Amer J Immunol*, 2019, 15: 1-4. (This paper is a product of OURA’s Academy of Pharmaceutical Industry Scholars).
- Brown, M.A. Dickmann, E. Hitt, M. and Stephens, A. Rocky Mountain Scholars Program: Impact on Female Undergraduate Engineering Students. International Journal of Engineering Pedagogy, 2020, In Press. (This paper is a product of OURA’s Rocky Mountain Scholars Program).
- Buchan, T., Kruse, S., Todd, J., & Tyson, L. (2020). A transformative approach to incorporating adaptive courseware: Strategic implementation, backward design and research-based teaching practices. *Current Issues in Emerging ELearning*. Manuscript submitted for publication.
- Buchan, T., Kruse, S., & Todd, J., (2020, March) Enhancing Instruction Through The Use Of Adaptive Courseware And Research-Based Teaching Practices. Paper presented at Colorado Digital Learning Symposium, Fort Collins, CO.
- Buchan, T., Kruse, S., & Todd, J., (2020, April) Enhancing Instruction Through The Use Of Adaptive Courseware And Research-Based Teaching Practices. Paper presented at OLC Innovate 2020, Chicago, IL.
- Garrity, D., Clark, S, & Buchan, T. (2020, March 26). Learning assistants in courses using adaptive courseware. [Webinar]. In *Personalized Learning Consortium Webinar Series*.
- Halliwel, P., Whipple, S., Hassell, K.N, Bowser, G., Husic, D.W., and Brown, M.A. Twenty-First Century Climate Education: Developing Diverse, Confident, and Competent Leaders in Environmental Sustainability. *Bull Ecol Soc Am*, 2020, 101(2) 1664-1675. (This paper is a product of OURA’s Academy of Sustainability Scholars which used to house RMSSN).
- Lanning, S., and **Brown, M.A.** Undergraduate Research as a High Impact Practice in Higher Education. *Education Sciences*, 2019, 9(3) 160-161.
- Ngai, C.; Corbo, J. C.; Falkenberg, K.; Geanious, C.; Quan, G. M.; Pawlak, A.; Pilgrim, M.E.; Reinholz, D. L.; Smith, C.; Wise, S. *Facilitating Change in Higher Education: The Departmental Action Team Model*. (book)
- O'Sullivan, P., Voegelé, J., Buchan, T., Dottin, R., Goin, K., Hamideh, M., ... Berg, K. (2020). Adaptive courseware implementation: Investigating alignment, course redesign, and the student experience. *Current Issues in Emerging ELearning*. Manuscript submitted for publication.
- Pacheco-Ortega, G.A., Chan-Pérez, J.I., Ortega-Pacheco, A., Guzmán-Mar-n, E., Edwards, M., Brown, M.A., Jiménez-Coello, M., Hernández-Cortazar, I.B. Screening of Zoonotic Parasites in Public Parks from Subtropical Mexico. *J Parasitol Res*, 2019, 19: 7409076-7409082. (This paper is a product of OURA’s NSF-IRES Program).

- Todd, J., Buchan, T., Colbert, D., Falkenberg, K. (2019). Developing and Evaluating Teacher Effectiveness at Colorado State University. *The Best of the 2019 Leadership in Higher Education Conference*. Magna Publications. <https://www.magnapubs.com/pdfs/Best-of-LHE-2019.pdf>
- Quan, G.M., Corbo, J. C., Finkelstein, N. D., Pawlak, A., Falkenberg, K., Geanious, C., Ngai, C., Smith, C., Wise, S., Pilgrim, M. E., & Reinholz, D. L. Designing for institutional transformation: Six principles for department-level interventions. *Physical Review Physics Education Research* **15**, 010114 (2019).
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- Reinholz, D. L., Pilgrim, M. E., Falkenberg, K., Ngai, C., Quan, G. M., Wise, S., Geanious, C., Corbo, J. C., & Finkelstein, N. Departmental Action Teams: A five-year update on a model for sustainable change, in *RC20/20 (the 2018 Reinvention Collaborative Biennial National Conference digital volume)*
URL: <https://www.rc-2020.org/falkenberg>

Professional Development

Collectively, TILT staff participate substantively in professional development offerings from in and outside CSU. Our Inclusive Excellence Committee and Assessment Team lead regular professional growth activities on their respective topics for TILT staff.