



CRLT

**CENTER FOR RESEARCH ON
LEARNING & TEACHING**
UNIVERSITY OF MICHIGAN



2014 – 2015

Annual Report

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This report was compiled by Ryan Hudson, Matt Kaplan, Meg Bakewell, Amy Hamermesh, Jeri Hollister, and Laura Gonzalez-Garcia.

Executive Summary

Letter From Director Matthew Kaplan

The University of Michigan pursued a range of bold educational initiatives in the 2014-2015 academic year, and CRLT helped realize the visions of vice provosts in three distinct areas: engaged learning, diversity and inclusion, and digital education.

CRLT's role in the Transforming Learning for a Third Century (TLTC) initiative included partnering with James Holloway, Vice Provost for Global and Engaged Education, on developing an assessment "toolkit," convening gatherings for grantees and faculty colleagues around engaged learning, and consulting with grant applicants and awardees.



At the invitation of Rob Sellers, the Vice Provost for Equity, Inclusion, and Academic Affairs, CRLT consultants developed a strategy for promoting effective practices for inclusive teaching for new faculty across the university and created a new grant that enabled faculty to form learning communities with colleagues for the improvement of climate in their departments, schools, or colleges.

Finally, CRLT worked closely with the Vice Provost of Digital Education and Innovation, James Hilton, to reform the current digital environment and to envision the future of digital education. The former included a comprehensive evaluation of fall and winter pilots of the new Canvas learning management system. The latter included participation on U-M's Digital Innovation Advisory Group (DIAG) and on an inter-institutional committee examining the implications of Unizin for teaching and learning across partner campuses.

The year also brought recognition of the excellence of CRLT's work, both at U-M and nationally. The CRLT Players Theatre Program received a U-M Distinguished Diversity Leaders Award, and the national organization of faculty developers bestowed its highest honor for research on a CRLT project examining the impact of the LSA Teaching Academy.

CRLT experienced several personnel transitions this past year as we bid farewell to colleagues who moved on to new challenges and hired new colleagues who are bringing fresh perspectives and new backgrounds to our work. Among those hires are Gina Hedberg and Michelle Majeed, two new instructional consultants. Gina has a PhD from the University of Wisconsin and will focus on STEM disciplines and interprofessional education in the health sciences. Michelle Majeed came to us from the University Toronto, and will focus on GSI development programs, including our collaborations with the English Language Institute. Finally, I was gratified to be selected as CRLT's new Executive Director after a national search. That process involved a tremendous time commitment from the faculty and staff search committee, as well as all of my colleagues here at CRLT, and I am grateful to them for their efforts.

We at CRLT are excited about the many educational initiatives underway at the university, as well as the continually expanding conversation about ways to create a model for a 21st-century research university. We look forward to playing a central role in advancing U-M's culture of teaching by sparking and participating in these campus conversations, collaborating on and driving new initiatives, and providing the core services that support teaching excellence on campus.

A handwritten signature in black ink, appearing to read "Matthew Kaplan". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Matthew Kaplan, Executive Director
Center for Research on Learning and Teaching

CRLT's Core Services

Mission Statement

The mission of the Center for Research on Learning and Teaching (CRLT) is to promote excellence and innovation in teaching in all nineteen schools and colleges at the University of Michigan. CRLT is dedicated to the support and advancement of evidence-based learning and teaching practices and the professional development of all members of the campus teaching community. CRLT partners with faculty, graduate students, postdocs, and administrators to develop and sustain a university culture that values and rewards teaching, respects and supports individual differences among learners, and creates learning environments in which diverse students and instructors can excel.

Support for Teaching

Serving all members of the teaching community, CRLT offers consultations on pedagogical and curricular issues, along with a range of grants programs to fund instructional innovation. CRLT also presents orientations and seminars for campus-wide audiences, as well as workshops and retreats tailored to the needs of academic units. *2014-2015 highlights: Faculty gatherings for sharing and disseminating lessons learned from TLTC initiative, learning community for faculty piloting Canvas, Richard Felder workshops at CRLT-Engin 10th anniversary celebration*

Digital Education

Through consultations, workshops, and web resources, we help instructors select and integrate into their teaching the technologies that best meet their goals for student learning. We collaborate with other offices to assess the value of emerging technologies for teaching and learning and to disseminate effective practices for teaching with technology. *2014-2015 highlights: evaluation of pilots of Canvas LMS, participation in Digital Innovation Advisory Group (DIAG)*

Diversity and Inclusion

CRLT advances a teaching culture that attends to diversity and fosters positive learning climates for students and instructors of all backgrounds and social identities. CRLT highlights inclusive teaching in our programs and consultations, and we offer customized workshops and resources on diversity-related topics for faculty, graduate students, and departments. *2014-2015 highlights: professional development plans around inclusive teaching for new faculty and GSIs; new grant for Faculty Communities for Inclusive Teaching*

Theatre

CRLT Players sessions use theatre to seed reflection about issues that negatively impact inclusive climate and to spark dialogue about strategies for addressing them. The Players perform for faculty, graduate students, and administrators. Their repertoire focuses on both classroom and institutional climate. *2014-2015 highlights: U-M Distinguished Diversity Leaders Award, new mental health sketch, Distress Signals*

Assessment and Research

CRLT focuses on projects that generate evidence useful to faculty and administrators for improving courses or curricula. Services range from consultations about effective methods to large-scale projects that involve data collection, analysis, and facilitation of faculty discussions about results. *2014-2015 highlights: consultations with TLTC grant writers and grantees, assessment projects for 19 schools and colleges*

CRLT Year at a Glance

► SUMMARY of CRLT SERVICES

Total Services Provided **14,843**

(Some individuals receive multiple services)

Total Services for U-M Clients **13,650**

Campus-wide programs 7,279

Disciplinary-based, customized programs for departments, schools, & colleges 4,014

Consultations 1,920

Instructors receiving midterm student feedback (MSF) sessions 408

Total Services for External Clients **1,193**

Presentation and workshop participants 163

Audience members at external theatre performances 741

Consultations and other services 289

► DISCIPLINED BASED SERVICES BY SCHOOL/COLLEGE

School or College *Individuals* *Services*

Architecture and Urban Planning 90 182

Art & Design 33 83

Business 85 201

Dentistry 56 190

Education 114 300

Engineering 959 2,228

Information 80 281

Kinesiology 50 189

Law 34 110

LSA 1,371 5,388

Medicine 523 1,099

Music, Theatre & Dance 82 244

Natural Resources and Environment 85 210

Nursing 86 192

Pharmacy 78 224

Public Health 171 377

Public Policy 53 100

Rackham 3 22

Social Work 75 201

Administration 126 706

Libraries (U-M) 46 152

Other 61 79

U-M Dearborn 20 28

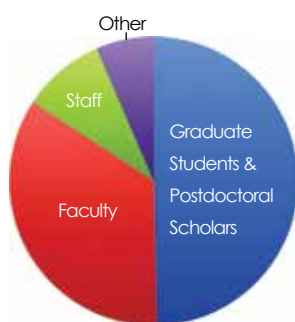
U-M Flint 9 11

Individuals, Unit Unknown 55 -

Services, Unit Unknown - 853

TOTAL: **4,345** **13,650**

► U-M Client Profiles



4,345 Unique Individuals

- Graduate Students & Postdoctoral Scholars ... 2,157
- Faculty 1,502
- Staff 404
- Other 282



Faculty by Rank

- Assistant Professor. 413
- Lecturer. 280
- DDC (Deans, Directors, Department Chairs) 235
- Professor 230
- Associate Professor 212
- Other 132

► CONSULTATION SERVICES

- 1,920** Consultations
- 408** Midterm student feedback sessions (MSFs)
- 14,725** Students served by MSFs
- 17** U-M offices advised
- 29** Committees with CRLT representatives

► FACULTY GRANTS & AWARDS

- 4** Award competitions
- 7** Grants competitions
- 135** Faculty recipients
- \$366,000** Distributed by CRLT

► ONLINE

- 687,128** Visits to CRLT website from
- 226** Countries
- 43** Blog posts
- 1,775** Twitter followers

GLOBAL REACH

- 50 U.S. educational institutions
- 17 other U.S. organizations
- 51 foreign institutions



► CRLT PLAYERS

- 45** Performances at U-M
- 11** External performances
- 16** Different sketches performed
- 3,431** Audience members

► PROGRAMS FOR GRADUATE STUDENTS/POSTDOCS

- 4** Preparing Future Faculty (PFF) programs
- 385** Participants in PFF programs
- 2** Teaching certificate programs
- 887** Enrollees in certificate programs
- 36** Graduate teaching consultants

► RESEARCH & PUBLICATIONS

- 19** Schools and colleges using CRLT assessment services
- 18** Investigating Student Learning grantees
- 8** CRLT action research projects
- 39** Publications and presentations



CRLT Community

CRLT Staff For biosketches of CRLT Regular Staff, visit www.crlt.umich.edu/about-crlt/staff-directory.



Management Team

Matthew Kaplan
Deborah Meizlish
Mary Wright

CRLT-Engin

Cynthia Finelli
Carol Lagemann
Bill Lloyd
Steve McKenzie
Tershia Pinder-Grover

CRLT Consultants

Meg Bakewell
Theresa Braunschneider
Rachel Niemer
Laura Schram
Amber Smith
Erping Zhu

Theatre Program

Sara Armstrong
Courtney Riddle
Jessica Von Hertsenberg

Administrative Staff

Lori Dickie
Ryan Hudson
Carolyn Parker

Postdoctoral Research Associates

Liv Anderson
Victoria Genetin
Ronit Greenberg

Project Staff

Pam Fisher
Laura Gonzalez-Garcia
Amy Hamermesh
Jeri Hollister
Kathryn Pamula
Melinda Thompson

Graduate Teaching Consultants See p. 20 for a description of the GTC program.



Christie Allen
Chloe Armstrong
Daphna Atias
Thomas Bridges
Sara Crider
Pierluigi Erbaggio

Tim Green
Julia Hansen
Annie Harmon
Dana Jackman
Danielle Lillge

Tamarie Macon
Francesca Minonne
Karen Nielsen
Ariana Orozco
Melody Pugh

Laura Sánchez-Parkinson
Rohan Sud
Sarah Suhadolnik
Sarah Sutter
Claire Whittlinger
Timeka Williams

Engineering Teaching Consultants See p. 20 for a description of the ETC program.



Fall 2014

Bill Arthur
Laura Chang
Julia Faeth
Anoushe Jamshidi
James Juett

Justin Li
Lavinia Li
Sahar Rahmani
Elizabeth Stewart
Bryce Wiedenbeck

Winter 2015

Bill Arthur
Khalid Ahmed
Julia Faeth
Anoushe Jamshidi
Mai Le

Lavinia Li
Zach Noskey
Sahithya Reddivari
James Saraidaridis
Bryce Wiedenbeck

CRLT Faculty Advisory Board

The board advises the executive director on policies and activities that enable CRLT to fulfill its mission. Important issues include, but are not limited to, program and research objectives and priorities, grants competitions, resource procurement and allocation, national project participation, and intra-university relations. Board members play a key role as liaisons between the center and the rest of the university community. The advisory board typically meets 4-5 times during the academic year.



Patricia Abbott
Associate Professor of Nursing



Scott D. Campbell
Associate Professor of Urban Planning



Vicki Ellingrod
John Gideon Searle Professor of
Pharmacy



M. Melissa Gross
Arthur F. Thurnau Professor of
Movement Science



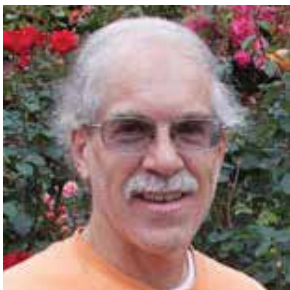
Victoria Johnson
Adjunct Associate Professor of
Organizational Studies



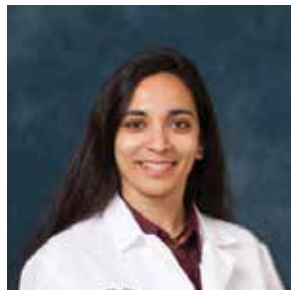
Martha Jones
Arthur F. Thurnau Professor of
History



Gavin LaRose
Lecturer IV in Mathematics



Mario Mateo
Professor of Astronomy



Seetha Monrad
Assistant Professor of Internal Medicine



Shobita Parthasarathy
Associate Professor of Public Policy



Damani Partridge
Associate Professor of Anthropology and
of Afroamerican and African Studies



Michael Thouless
Arthur F. Thurnau Professor of
Mechanical Engineering and of
Materials Science and Engineering



Steven Skerlos
Arthur F. Thurnau Professor of
Mechanical Engineering

New and Noteworthy

Awards and Milestones



For demonstrating extraordinary commitment and dedication to diversity, the CRLT Players Theatre Program team received a Distinguished Diversity Leaders Award in 2014. Jointly sponsored by the Office of the Provost and University Human Resources, the award celebrates progress toward creating a welcoming, supportive, and diverse environment that helps set U-M apart. The CRLT Players were honored for their outstanding work during the past 15 years helping over 50,000 faculty, GSIs, and administrators at U-M and nationwide create more inclusive classrooms, labs, clinics, and departments.

In November 2014, CRLT staff received the Robert J. Menges Award for Outstanding Research in Educational Development at the annual meeting of the Professional and Organizational Development Network (POD). The award recognized CRLT research documenting the impacts of LSA's Teaching Academy for

new faculty, providing a unique model for approaches to measuring the effect of educational development efforts (see p. 31). In addition, Timeka Tounsel, one of a CRLT's Graduate Teaching Consultants, received a Donald H. Wulff Diversity Travel Fellowship from POD.

CRLT in Engineering (CRLT-Engin) celebrated ten years of promoting excellence in engineering education since the office was established in 2004. In that time, CRLT-Engin has interacted with a remarkable 74% of COE faculty. Looking at the cumulative impact of just one of their services, CRLT-Engin staff conducted more than 800 midterm student feedback (MSF) sessions over the decade, allowing more than 25,000 students to provide feedback for their instructors. Founding director Cindy Finelli's work also received national recognition in the form of the Ronald J. Schmitz Award for Meritorious Service and a Campus Representative Award for Most New Professional Members in North Central Section, both from the American Society for Engineering Education (ASEE).



Strategic Planning for Diversity and Inclusive Teaching

As part of a committee created by the Vice Provost for Equity, Inclusion, and Academic Affairs, CRLT collaborated with IGR staff, faculty from the School of Education, and representatives of the Provost's Office to create a professional development model for faculty around inclusive teaching. The model includes three parts: orientation to U-M, applying key concepts and advancing skills, and reflection on practice. After being piloted at the LSA Teaching Academy in August 2015, the model will be shared with faculty leaders from each school and college, and CRLT will be available for consultations on ways to implement it. In addi-



tion, CRLT will conduct focus groups with faculty across campus to learn more about what professional development around inclusive teaching they are aware of, what additional opportunities they'd like to see, and their responses to this model, including challenges and obstacles.

Supporting the TLTC Initiative



In collaboration with office of the Vice Provost for Global and Engaged Education, CRLT provided substantial infrastructure for work being carried out under the aegis of Transforming

Learning for a Third Century (TLTC). In 2014-2015, CRLT assisted directly with several projects funded by transformation grants, began the process of developing assessment toolkits for use by faculty seeking to determine the impact of their projects on student learning, and planned and facilitated networking events for grantees and faculty colleagues.

TLTC programming kicked off in fall 2014 with the “Thinking Big” symposium, the first gathering of grant winners. Nearly 100 attendees shared information and insights about their projects and discussed common challenges they face in promoting engaged learning at U-M. The winter Provost’s Seminar on Teaching, *Unscripted: Engaged Learning Experiences for U-M Students*, brought together both grantees and faculty more broadly to share strategies for promoting engaged learning. The program included lightning talks by students who described how participating in engaged learning has enriched their experience at U-M. A smaller Creativity Lunch in May 2015 allowed grantees to compare their efforts to develop students’ creative processes and to inform a CRLT

“The wonderfully planned and executed event really helped me to think about the issues in a more constructive, critical, and COLLECTIVE way.

TLTC Committee Member ”

Occasional Paper that will focus on assessing creativity as part of the larger assessment toolkit for the TLTC.

Additional faculty development has accompanied CRLT staff involvement with Transformation grants, including the following two projects: the Interprofessional Health Education and Collaborative Project (IPE), and the Digital Innovation Greenhouse (DIG). For the IPE project, CRLT has taken the lead on organizing faculty discussions designed to change the culture of health education to one in which interprofessional course and clinical work are the norm. CRLT conducted two faculty retreats and organized a panel on successful IPE projects for all alumni of the Health Sciences Teaching Academy. Housed within the Digital Education and Innovation (DEI) office, DIG identifies promising educational innovations using digital tools, such as ECoach and GradeCraft, and provides support to bring them to a larger scale. Faculty learning communities associated with the projects will be created by former CRLT assistant director Rachel Niemer, now working directly for DEI as the Director of Digital Pedagogy and Learning Communities.



Finally, CRLT managed multiple job searches and hired two postdoctoral research associates dedicated to TLTC work. In addition to assisting with the overall evaluation of the TLTC initiative, the postdocs have consulted with grantees on assessment, and they will begin developing assessment “toolkits” for each of the TLTC program’s five core learning goals: creativity; intercultural intelligence; social/civic responsibility and ethical reasoning; communication, collaboration and teamwork; and self-agency and the ability to take risks.



Evaluation and Support of CANVAS: U-M's New Learning Management System (LMS)

To inform recommendations by the Digital Innovation Advisory Group (DIAG) to the Provost about whether and how to migrate from CTools to Canvas, CRLT staff designed and implemented evaluations of ITS's pilot of Canvas in both fall and winter terms. CRLT also convened a faculty learning community of those piloting Canvas in order to provide support and information to faculty as they began working in Canvas and to identify best pedagogical practices to share with the wider campus community (see p. 17 and p. 29).

“ Thank you again for the great presentation on Unizin and Canvas for faculty in our school. I thought that you did a WONDERFUL job of hitting just the right notes for faculty. You built the context for Canvas as part of the digital ecosystem for the future of teaching and learning. You also did a fabulous job answering (difficult) faculty questions.

Faculty Participant

Online Course for Postdocs

In collaboration with Rackham and DEI, CRLT staff developed an online version of the Postdoctoral Short-Course on College Teaching in Science and Engineering (PSC). This 8-week course focuses on

“ I was at another university recently doing some teaching consultations with junior faculty. One of them had done a postdoc at Michigan and was doing a terrific job of teaching, really focusing on student learning. I asked him where he had learned so much about teaching and learning, and he said he had taken a course at CRLT for postdocs. He raved about the course and the people who had taught it.

Faculty Member

evidence-based practices and prepares participants for their first faculty positions. The face-to-face program has been offered since 2009, and the development of an asynchronous version will expand the reach of the course, both at U-M and nationally. Modules include topics ranging from course design and the science of learning, to diversity in the STEM classroom and trends in STEM education. The online version will be piloted in fall 2015.

Sketch on Student Mental Health



In response to rising concerns at U-M and nationally, the CRLT Players designed a session to assist instructors in improving skills for identifying and responding to student mental health challenges as they emerge in academic interactions. Created to meet a need identified by leadership in the university's two largest colleges, the theatrical scenarios and facilitation plan were developed after a year-long consultation process with other campus groups doing work in the area of student mental health. After a successful round of pilot performances, the CRLT Players received requests to perform *Distress Signals* four times during the 2015-16 academic year.

“ ...the actors involved are providing an accurate and multi-layered depiction of the many different ways that mental health concerns can present behaviorally in a classroom setting.”

Faculty Participant

Faculty Communities for Inclusive Teaching (FCIT)

With funding from the Vice Provost for Equity, Inclusion, and Academic Affairs, CRLT awarded small grants to seed faculty-led learning communities on inclusive teaching. This effort leverages existing faculty expertise and interest to build faculty leadership and capacity for creating a positive campus climate. FCIT projects took a variety of forms, including multidisciplinary reading groups, departmental workshops, and campus-wide events. CRLT convened an initial meeting of all grantees and subsequently provided support workshops as requested. CRLT is facilitating dissemination by conducting follow-up interviews and organizing a fall 2015 poster fair that will also kick off a second round of funding. Grantees are listed on p. 44.

International Faculty Development



Since 2006, CRLT has supported U-M's China initiative with programming for academic administrators from top Chinese research universities. In late August 2014, CRLT hosted a three-week China Fellows Program for five visiting scholars who run teaching centers on their own campuses, in this case Central China Normal University, Nanjing University, Renmin University of China, and Shanghai Jiao Tong University. The backbone of the program consisted of 16 seminars offered by CRLT staff and U-M faculty and administrators. In addition, fellows attended CRLT faculty and GSI orientations, observed classes taught by outstand-

ing U-M faculty, and made presentations about their plans for implementing what they learned at their own teaching centers.

In November 2015, CRLT Assistant Director Erping Zhu made three presentations in China. She addressed an audience of about 100 faculty developers from institutions of higher education who had convened at Shanghai Jiao Tong University (SJTU), and she also spoke about teaching and technology to 20 SJTU faculty and staff. A workshop on designing courses for engagement and understanding was delivered to about 50 faculty at Renmin University of China.

In January 2015, Director of Assessment Mary Wright and Assistant Director Rachel Niemer traveled to the Universidad de los Andes in Santiago, Chile. Over the course of their three-day stay, they made presentations, conducted workshops for faculty clustered by discipline, and met less formally with different groups of faculty and administrators.

Support *for* Teaching

Consultations

CRLT professional staff and graduate teaching consultants (GTCs) provide consultation services to faculty, graduate students, and administrators. Short consultations often involve requests for materials, information, and advice about campus resources for teaching and learning. Topics for more intensive consultations include curricular and instructional matters such as course design, integrating innovative approaches to teaching and learning, interpretation of student ratings, and improvement of teaching and learning in a class or discipline. CRLT staff conducted 1,920 individual consultations, some brief and some extensive, with U-M clients during the 2014-2015 academic year.

Midterm Student Feedback

CRLT collects student feedback for faculty and GSIs who wish to assess and improve their teaching during the term. A CRLT consultant observes the class and then confers with the students about what is going well and what changes would improve their learning. The consultant later meets with the instructor to report findings and discuss strategies for change. Faculty in charge of large, multi-section courses also use this service to gain an overview of the course. Section leaders receive confidential individual feedback and the supervising faculty member receives a report of overall trends in the course that can be used to facilitate and inform curricular improvement. During the 2014-2015 academic year, CRLT staff conducted midterm student feedback sessions for 408 faculty and GSIs across campus. These sessions provided an opportunity for 14,725 undergraduate and graduate students to share feedback in the middle of the term, a time when adjustments to teaching practices can directly benefit their learning experience.

What people are saying about Consultations and Midterm Student Feedback

“CRLT is an amazing resource, which has both helped me with my teaching and to stay sane as I trail blaze through teaching new courses.”

“Great service! Having a true professional assist in devising teaching strategies is a wonderful asset to any faculty member - new or experienced.”

“Students were grateful. I learned a lot and was inspired (and I’m pretty good in the classroom already), and it was hugely impactful, without requiring a big time investment on my part. The service itself is great!”

“The consultant did a fantastic job of soliciting useful, frank feedback. Both the GSI and I made use of this feedback, and students definitely took notice (some even mentioned it in their end-of-course evaluations). I will strongly recommend this service to my colleagues.”

Orientations

New Faculty Orientation

In conjunction with the provost and executive vice president for academic affairs, CRLT organized and facilitated the campus-wide New Faculty Orientation. In August 2014, 148 faculty members attended this event. The president and interim vice president for research welcomed the new faculty, and the CRLT Players presented *7 into 15: Welcome to Teaching at U-M*, which focuses on issues of diversity, inclusion, and faculty worklife. Participants heard from the provost at lunch along with a panel of three faculty who discussed what it's like to work at U-M. In addition, new faculty attended one of the following five concurrent sessions focused on teaching:

- Facilitating Discussion by Leveraging Student Diversity
- Research-Based Practices for College Teaching
- Student Teams in the STEM Classroom
- Using Digital Tools to Engage Students and Enhance Teaching
- Teaching Critical Thinking in the Clinic

The New Faculty Orientation also included an information fair that featured exhibits and representatives from 48 U-M offices and programs.

GSI Teaching Orientations

CRLT organized and facilitated a university-wide Graduate Student Instructor Teaching Orientation at the beginning of the fall 2014 and winter 2015 terms. This past

year, 444 GSIs attended the fall program, and the first combined winter program was attended by a total of 230 GSIs, 87 of whom were from engineering. During these orientations, each GSI was given the opportunity to practice a 5-minute lesson and receive feedback from peers and an experienced instructor or CRLT staff member. New GSIs also engaged in discussions about the role of GSIs at the University of Michigan, collected resources related to this role, consulted experienced GSIs, and participated in workshops designed to address key issues. The fall orientation included the following workshops:

- Classroom Communication at U-M
- Dealing with Controversy During Classroom Discussion
- Evaluating Student Writing
- Facilitating Discussions in the Humanities
- Facilitating Discussions in the Social Sciences
- Facilitating Group Work to Maximize Learning in Labs and Discussions
- Grading in Quantitative Courses and the Sciences
- Identity and Authority in the Classroom
- Interactive Theatre: TBD: Welcome to Teaching
- Inclusive Teaching During the First Week and Beyond
- Leading Problem-Solving Sessions
- One-to-One Teaching in Music, Art, Dance, and Architecture
- Strategies for Teaching Foreign Language Courses
- Teaching Effectively with Technology

CRLT also organized a customized teaching orientation program for 146 new GSIs in the college of engineering in fall 2014. After the



initial day of training, GSIs completed their ongoing professional development by participating in an advanced practice teaching session or writing a reflection on either a seminar focused on pedagogy or a classroom observation with midsemester student feedback (MSF). In addition, CRLT offered a separate orientation for undergraduate instructional aides (IAs) each semester, serving 162 attendees.

ELI-CRLT Courses

In collaboration with the English Language Institute (ELI), CRLT co-sponsors two intensive courses for graduate students whose undergraduate education was in a language other than English and who plan to have GSI appointments in LSA. One course is offered in August to incoming U-M graduate students who have recently arrived in the country; the other is a ten-week, winter-term course for those who are already graduate students. Both address language proficiency, pedagogical strategies, and cultural awareness. In August 2014, 25 international graduate students participated in the course, and during winter 2015, 23 more students participated.

Seminars

Campus-Wide Seminar Series

CRLT offers seminars and programs for faculty, graduate students, and postdocs. These programs bring instructors together to share ideas across disciplines. They also help instructors develop and improve their teaching skills, expand their repertoire of teaching methods, and gain new perspectives on teaching at U-M. CRLT professional staff, faculty members from other units of the university, and guest presenters from other universities conduct CRLT seminars. In 2014-2015, 997 faculty, graduate students, and postdocs attended all seminars, including the following programs:

- Active & Engaged Learning in Digital Contexts*
- Advanced Practices for Inclusive Teaching** (twice)
- Campus Climate in Your Classroom*
- CRLT Players: Hidden (dis)Abilities in the Classroom
- Engaging Students in Learning: An Online Workshop
- Engaging the World From Your Classroom*
- Facilitating Discussions in the Social Sciences and Humanities** (fall and winter)
- Learning Community on Undergraduate STEM Teaching** (6 sessions)
- Next Steps with IT**
- Now That I Have It, What Grade Should I Give It? Evaluating Student Writing
- Organize, Streamline and Simplify: Teaching Efficiently with Technology** (twice)
- Research-Based Practices for College Teaching: An Online Workshop (fall and summer)
- Six-Session Training for Diversity and Inclusive Teaching**
- Student Learning Analytics at Michigan (SLAM, 13 sessions):
 - Case of The Month: An Interactive Approach to Case Based Learning in Oral Pathology
 - Characterizing Instruction in Introductory Science Courses at Michigan State University
 - Education without States
 - Evidence That Class Participation Affects Student Outcomes
 - Learning Analytics, Digital Education, and Innovation at U-M
 - Learning Analytics Task Force: 2012-2015
 - Multi-Institutional Explorations of Grade Penalties
 - Quantitative Insights on In-Class Creation and Sharing of Knowledge
 - The Stats 250 E2Coach Project: What Did We Do? What Did We Learn?
- Tell Us How You Really Feel: Insights from Large-Scale Text Analysis of Student Survey Responses
- The Texas Vision: A Cross-Institutional Strategy for Access, Affordability, and Student Success
- Two Years of Michigan MOOCs: What Analytics Tell Us About Learning in These Environments
- Unlocking the Hidden Potential of Massive Open Online Courses (MOOCs)
- Teaching in a "Flipped Classroom" – A Four-Session Learning Community*
- Teaching With Technology: How Can I Include All Students?
- Using Technology to Check Student Understanding and Provide Feedback: An Online Workshop (summer and winter)
- What's It Like to Teach at a Liberal Arts College?*
- What's It Like to Work at an Institution with Teaching-Research Balance?*

CRLT in Engineering Seminar Series

During the fall 2014 and winter 2015 terms 654 engineering faculty, graduate students, and postdocs attended the following programs and seminars offered by CRLT in Engineering:

- Are They "Getting It"? Low-Stakes Ways to Assess Student Learning**
- Cooperative Learning: Turning Student Groups into High-Performance Teams
- Creating a Classroom Environment to Enable All Students to Succeed
- Did You Really Mean That? Improving Communication With Your Students**
- Engaged Student Learning: Lessons Learned From the Flipped Classroom*
- Implementing Your Active Learning Plan** (2 sessions per term)
- Maximizing Student Learning During Office Hours**
- Ninth Annual Research and Scholarship in Engineering Education Poster Fair
- Research-Based Principles for Making Learning Work**
- Teaching Is Not Learning
- Ways That Work: Effective Classroom Teaching*
- What Do I Do Now? Strategies for Handling Sticky Situations with Students**

* faculty only, ** graduate students and postdocs only

Programs for Faculty

Programs for New Faculty

LSA and Health Sciences Teaching Academies:

New faculty in LSA and the health sciences schools and colleges (dentistry, kinesiology, medicine, nursing, pharmacy, public health, and social work) are introduced to teaching at U-M through intensive, two-day orientations at the end of August. Designed by CRLT in consultation with deans, the teaching academies include opportunities for participants to discuss course planning with senior faculty in related disciplines, to familiarize themselves with course management and other instructional technologies, and to deliver a practice lesson and receive feedback on their teaching from colleagues. Additional topics at the LSA Teaching Academy address pedagogies for teaching undergraduate students and strategies for teaching and mentoring graduate students. The Health Sciences Teaching Academy focuses on teaching small groups and fostering critical thinking through clinical teaching, as well as in traditional classrooms. In their first term of teaching, members of both academies may work individually with a CRLT consultant who observes their teaching or conducts a midterm student feedback session. (See p. 12 for more information about MSFs.) Follow-up gatherings throughout the academic year further develop networks of support within each academy's new cohort of faculty. In 2014-2015, 27 assistant professors took part in the LSA Teaching Academy, and the Health Sciences Teaching Academy served 25 faculty on the tenure and clinical tracks.



Ross Teaching Academy: Since 2013, CRLT has collaborated with the dean's office on a teaching academy focused on the specific needs of new faculty in the Ross School of Business. In 2014-2015, seven faculty and four staff participated in the Academy.

College of Engineering Programs: Immediately following the campus-wide new faculty orientation (p. 13), CRLT in Engineering provided additional programming for 20 faculty new to the college. A panel of experienced faculty discussed teaching in the college, and new faculty had the opportunity to deliver a practice lesson and receive feedback on their teaching. The program also featured a faculty panel on starting a research group, a discussion on mentoring graduate students, a panel of U-M students in engineering, and an overview of both instructional technology and research computing and software. Subsequent programs covered strategies for new faculty success.

Provost's Campus Leadership Program (PCLP)

On behalf of the provost, CRLT coordinates an academic leadership program with two parts: a day-long orientation for new department chairs and associate deans, and ongoing professional development for all chairs and associate deans with periodic roundtable sessions. Roundtable topics in 2014-2015 included effective practices for faculty recruitment, difficult conversations, time management and priority setting, running good meetings, and working effectively with staff.

The programs were well attended, with 88% of new department chairs and 65% of new associate deans and directors participating in at least one of the leadership events.



Faculty Grants and Awards

In 2014-2015, CRLT administered the Provost's Teaching Innovation Prize (TIP), designed to recognize outstanding pedagogical practices, as well as seven grants competitions for faculty to improve teaching and learning at the University of Michigan. The Office of the Provost and Executive Vice President for Academic Affairs funded four competitions: the Gilbert Whitaker Fund for the Improvement of Teaching, Internationalizing the Curriculum (ITC), the Faculty Communities for Inclusive Teaching (FCIT) initiative, and the Lecturers' Professional Development Fund. CRLT directly funded three competitions: the Faculty Development Fund (FDF), the Investigating Student Learning (ISL) Grant, and the Instructional Development Fund (IDF). A total of 135 faculty received grants or awards totaling almost \$366,000. (See Appendix A for lists of grantees.)

For these competitions, CRLT staff prepared and sent guidelines, consulted with grant applicants, prepared applications for internal and external review, reviewed and rated applications, facilitated faculty review panel meetings, sent letters to applicants, created accounts for grant recipients, guided grant recipients on their projects when requested, consulted with applicants who did not receive awards, and collected project reports.

After reviewing CRLT staff comments, CRLT's faculty advisory board members selected grantees for the Faculty Development Fund. The Advisory Board recommended awardees to the provost for Internationalizing the Curriculum and the Gilbert Whitaker Fund for the Improvement of Teaching. A panel of experienced lecturers made recommendations to the provost on proposals for the Lecturers' Professional Development Fund. CRLT staff selected grant recipients for the Instructional Development Fund. For the Provost's Teaching Innovation Prize, a panel of award-winning faculty selected recipients. A panel of previous grantees selected grant recipients for the Investigating Student Learning Grant.

CRLT also coordinated three additional teaching competitions for the provost's office: the Arthur F. Thurnau Professorship, the university's highest award for contributions to undergraduate education, as well as two external awards for which U-M runs an internal competition to select nominees, the U.S. Professors of the Year, and the Michigan Distinguished Professor of the Year.

Provost's Seminars on Teaching

Since 1996, CRLT has worked with the Office of the Provost to organize semi-annual Provost's Seminars on Teaching. The seminars promote lively and substantive dialogues about a wide range of teaching and learning issues relevant to the entire campus. In October 2014, 81 faculty attended the provost's seminar *Rebuilding STEM Education at Michigan*, which featured a keynote address by Robin Wright from the University of Minnesota. In March 2015, 176 faculty members attended *Unscripted: Engaged Learning Experiences for U-M Students*. (See p. 9 for more information.)



Faculty Learning Communities (FLCs)

Faculty Piloting Canvas: Faculty who piloted the Canvas learning management system (LMS) in 2014-2015 were invited to a series of four lunches in winter 2015. Faculty discussed the ways they were using Canvas, including successes and challenges. In these sessions, faculty explored new tools like SpeedGrader and Rubrics and identified many ways they could be used in their courses. They also reflected on opportunities for departments, schools and colleges and the university as a whole to improve teaching and learning as Canvas is more widely adopted. For example, participants saw great potential in the use of analytics across courses within a program and in the sharing of content among instructors within departments. The process alerted ITS to challenges faced by pilot faculty and generated tips for successfully transitioning courses from CTools to Canvas, along with examples of effective pedagogical strategies enabled by the new system.

Dialogues Institute: CRLT, in collaboration with The Program on Intergroup Relations (IGR), planned and presented a three-day institute for 16 faculty who teach multicultural content in a wide range of departments: Afroamerican and African studies, American culture, communications, comparative literature, English, history, musicology, organizational studies, philosophy, psychology, residential college, romance languages and literatures, sociology, and women's studies. Sponsored by the office of the LSA Associate Dean for Undergraduate Education, the institute included interactive sessions, short lectures, and workshop activities based on research about how best to mobilize social diversity for effective teaching and learning. Goals included helping faculty develop skills in three areas: facilitating productive student-student interactions in class; engaging students' diverse backgrounds and experiences to enhance learning; and effectively navigating one's own identities in courses focused on social identities, power, and justice. Participants applied new knowledge and skills by facilitating lessons of their own design and role-playing ways to handle difficult situations, such as student resistance and challenges to authority. In the summer and early fall, participants individually consulted with institute facilitators on their application of skills in their particular courses. In fall 2015, the whole group will reconvene to discuss strategies they have used in their classes. The institute was very highly rated, receiving a 4.53 average evaluation (on a 5-point scale) for the overall value of the program.

“ I appreciated how the facilitators modeled effective leadership and discussion strategies.

Faculty Participant

Large Course Initiatives: CRLT sponsored learning communities for faculty who teach large enrollment courses in LSA and in the College of Engineering. In LSA, eight faculty participated in the Large Course Initiative (LCI) during winter term. Over the course of four meetings, faculty read and discussed research on student learning and explored a range of instructional technologies useful in large courses. In addition, they visited the classrooms of colleagues who use innovative approaches to engage students in their large courses. To support implementation of the lessons learned, 7 of the faculty received small grants from LSA to revise their courses.

Fifth and sixth iterations of the Teaching Circle for Large Engineering Classes were offered in 2014-2015. Forty-one faculty participated, and sessions were co-facilitated by CRLT-Engin staff and senior faculty who teach large courses. Topics included rapport building, active learning, student motivation, and instructional technology. Research articles were integrated with local data to help participants identify useful strategies for their own classes. In addition to meeting regularly, participants observed colleagues' classes and got hands-on experience with technologies particularly useful for large classes.

International Faculty Dinner

With support from the office of the senior vice provost for academic affairs, CRLT hosted the fourteenth annual International Faculty Dinner in March 2015. This event provided an opportunity for 88 faculty with international backgrounds to socialize and exchange perspectives on teaching at U-M.

Programs for Graduate Students and Postdoctoral Scholars

U-M Graduate Teacher Certificate Program

In collaboration with the Rackham School of Graduate Studies, CRLT runs a U-M Graduate Teacher Certificate Program designed to assist GSIs with marketing their professional development as college-level instructors. Since October 2007, this program has offered graduate students an advantage in the academic job market by helping them document their preparation for their junior faculty teaching roles. The program also emphasizes the importance of teacher preparation in helping graduates gain faculty positions. Graduate students who wish to participate submit required documents and track their progress toward completion of the program on a web-based interface designed by CRLT. Program requirements include participation in a teaching orientation and ongoing seminars on teaching, classroom teaching experience, a teaching mentorship, and the submission of a statement of teaching philosophy.

Participation continued to increase during the 2014-2015 academic year. Specifically, 216 more graduate students enrolled, bringing the total number of participants to 1,122. This year 48 students completed the certificate requirements. Since the program's inception, CRLT has awarded a total of 367 certificates.

GTC+Digital Media Teacher Certificate Program



Launched in May 2014, the new GTC+ program (co-sponsored by the Institute for the Humanities) builds on the Rackham-CRLT Graduate Teacher Certificate by offering structured opportunities to think critically about technology tools and digital environments and the ways they shape teaching and learning. After taking an introductory online module, participants complete five workshops, three of which must go beyond technical training to pedagogical applications of technologies or digital media. They then organize or take part in two networking experiences related to teaching with digital media. An ePortfolio houses course design projects, artifacts of teaching practice, and participants' reflections on their work integrating digital media into their teaching.

Although designed with particular needs of humanities graduate students in mind, enrollment is open to all graduate students. To date, 33 graduate students representing 24 departments in 6 schools have enrolled in the program, and 3 students have completed the requirements and received the certificate.

Preparing Future Faculty (PFF) Programs

In 2014-2015, CRLT offered four programs in collaboration with Rackham.

The seventh iteration of the eight-session *Postdoctoral Short-Course on College Teaching in Science and Engineering* was conducted in fall 2014 for 31 postdoctoral scholars. The course modeled “the flipped classroom” by emphasizing advance preparation using video podcasts and readings so that time during sessions is devoted to active learning and reflection. Each participant had multiple opportunities to present a lesson to colleagues, develop a lesson plan for an inquiry-based lab exercise, and design a syllabus for a course to be taught in the future.

“I’ve “tasted” active learning and love it. The short course taught me about methods, lingo, pros and cons, . . . I feel much more prepared now!”

Postdoc Short-Course Participant

The *Intercampus Mentorship Program* connects faculty at nearby colleges with U-M graduate students and postdoctoral scholars. Eleven students and postdocs were funded to take part in a mentorship, which involved activities such as campus visits, discussions of the academic job search, and guest teaching. The participants were from five schools and colleges (education; LSA; medicine; pharmacy; and social work) and represented six LSA departments.

The twelfth annual *Preparing Future Faculty Conference*, co-sponsored by Rackham, with contributions from the International Center and The Career Center, took place in September 2014. More than 530 graduate students registered for this one-day conference, which featured 38 faculty panelists and the following concurrent sessions:

- Building Communities of Support Toward a Successful Academic Job Search
- Designing an Effective Teaching Demonstration
- Developing Your Teaching Philosophy
- Faculty Life at a Teaching-Focused Institution
- Faculty Success Off the Tenure Track
- From Interview to Job: The Hiring Process in Humanities and Social Sciences
- From Interview to Job: The Hiring Process in Science, Technology, Engineering, and Math Fields
- Interviewing for Academic Positions: Arts, Humanities, and Social Sciences
- Interviewing for Academic Positions: Science, Technology, Engineering, and Math Fields
- Mentoring Undergraduate Students
- Moving In and Out of Academe
- Starting and Running Your Faculty Research Agenda: Humanities and Non-Lab Social Sciences
- Starting and Running Your Faculty Research Lab
- Strategies, Tools, and Resources for Productivity
- The Future of Higher Education in a Digital World
- The Tenure-Track Process
- Transitioning to a New Institutional Context
- Underrepresented in Our Fields: Strategies for Faculty Success
- What's It Like To Teach at a Community College?
- Writing CVs and Cover Letters for Academic Positions: Science, Technology, Engineering, and Math Fields
- Writing CVs and Cover Letters for Academic Positions: Social Sciences and Humanities

The sixteenth annual *Rackham-CRLT Seminar on College Teaching: Preparing Future Faculty* took place in May 2015, with funding provided by the provost's office and Rackham. CRLT's assistant directors taught the seminar and invited faculty from across the campus to speak. Seventy-nine advanced graduate students applied, and CRLT accepted 60 as participants. The applicants represented 11 schools and colleges (architecture and urban planning; dentistry; education; engineering; LSA; medicine; music, theatre and dance; natural resources and environment; nursing; pharmacy; and public health) and included 18 LSA departments and programs.

“ The PFF Seminar Series had a HUGE positive impact on me, and I am very happily working now as a new faculty member at San José State University. A lot of the things I learned and perspective I gained through the PFF were instrumental in me getting this job.

PFF Seminar Participant

The 10-session seminar covered three major areas:

- Preparation for the academic job search, including assistance with the creation of a statement of teaching philosophy and a syllabus
- Information about higher education (e.g., institutional types, the nature of today's students, tenure, and faculty worklife)
- Discussion of effective and reflective teaching, including meetings with University of Michigan junior faculty, conversations about multicultural teaching and learning, and demonstration of and reflection on the use of instructional technology

The seminar also included an introduction to different types of institutions through a trip to one of four local campuses: Albion College, Eastern Michigan University, Kalamazoo College, or the University of Toledo. Those who successfully completed all requirements of the seminar received a certificate.

Graduate Teaching Consultants Program

CRLT's graduate teaching consultants (GTCs) are selected in a campus-wide competition. CRLT prepares the GTCs to consult with GSIs about their teaching during the upcoming academic year. GTCs draw on their knowledge and experience to help support GSIs, while learning more themselves about teaching and learning. All GTCs receive training in observing and videotaping classes, giving constructive feedback on teaching, collecting student feedback about teaching, and evaluating statements of teaching philosophy. GTCs collaborate with CRLT instructional consultants on activities designed to promote excellence in graduate student teaching across the university. For instance, GTCs plan and conduct sessions at the fall and winter teaching orientations for new GSIs. GTCs for 2014-2015 are listed on p. 6.

“ I loved having the chance to design a syllabus, work on my teaching philosophy, and visit with faculty at non R1 universities and colleges.

PFF Seminar Participant ”

A subset of GTCs focus on instructional technology. The IT-GTCs demonstrate effective uses of technology at fall GSI orientations and develop and deliver workshops on instructional technology throughout the semester.

Engineering Teaching Consultants Program

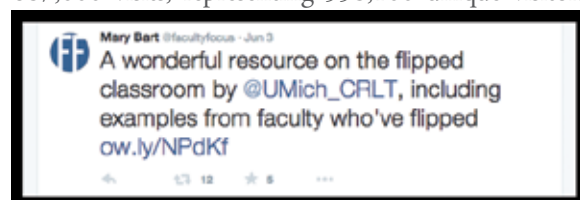
Engineering Teaching Consultants (ETCs) are experienced GSIs recruited by CRLT in Engineering (CRLT-Engin) each semester, and prepared by CRLT-Engin to consult with GSIs and undergraduate instructional aides (IAs). ETCs consult with GSIs and IAs to collect midterm student feedback from several hundred undergraduate engineering students. ETCs also plan and conduct sessions at the engineering GSI and IA teaching orientations, as well as workshops in the CRLT-Engin Seminar Series. ETCs for 2014-2015 are listed on p. 6.

Departmental GSI Training and Development

Individual departments are responsible for training their new GSIs, and CRLT staff members help departments across the university to develop, improve, and evaluate their programs. During summer 2014, fall 2014, and winter 2015, CRLT developed and conducted several sessions to help faculty coordinators and graduate student mentors (experienced GSIs) prepare for their roles and exchange resources. Workshop topics included running practice teaching sessions, observing classes and offering feedback, strategies for working with GSIs, issues in consulting, and conducting midterm student feedback sessions. CRLT also organized gatherings for graduate student mentors to exchange ideas about challenges of their mentoring role and resources for supporting their success. Resources included campus services for undergraduates they could recommend to GSIs (e.g., CAPS, Sweetland Center for Writing, Spectrum Center, etc.). Sessions for GSI trainers provided resources for preparing GSIs to anticipate and respond—with both compassion and appropriate boundaries—to student mental health challenges. CRLT also provided discipline specific workshops as part of departmental GSI training programs

Web Resources

Faculty, instructional consultants, and administrators at U-M and in higher education institutions throughout the U.S. and the world visit the CRLT website to obtain resources on teaching and learning. Between June 1, 2014, and May 31, 2015, the website received over 687,000 visits, representing 558,100 unique visitors (a 13% increase over the previous year) from 226 countries. Approximately 6% of visitors were from Ann Arbor, 19% from Michigan, and 46% from the United States. CRLT's web resources are continuously updated and expanded.



CRLT Social Media



Many of CRLT's pages are highly ranked by search engines such as Google, and about 78% of all visits to CRLT's website come from such search engines. Top search terms include "lesson plan," "lesson planning," "curriculum design," "teaching strategies," and "active learning." Overall, the "Strategies for Effective Lesson

Planning" page received the most visits, over 196,000, or about 21% of total visits. Other popular pages include "Teaching Strategies," "Active Learning," and "The Teaching Philosophy/Teaching Statement," each with over 30,000 visits.

The homepage at www.crlt.umich.edu features a blog which is read by audiences around the world. Intended primarily for U-M instructors who visit CRLT's site for timely teaching guidance, the blog also reaches 117 subscribers, and each post generates a Tweet to CRLT's 1,775 Twitter followers. In the past year, we updated the blog 43 times, publishing posts that highlight CRLT resources as well as innovative teaching by U-M faculty. While some posts announce events or news, the majority (following the advice of our faculty advisory board) contain

timely discussion of teaching strategies for U-M instructors. For example, around Veterans Day, we featured a post about the experiences of student veterans in the classroom. After the Ferguson shooting, we posted guidance for instructors on addressing students' experiences of race-based marginalization. And we often feature strategies for opening and closing the semester (e.g., "Breaking the Ice with Your Students" or "Reflecting on Learning at the End of the Term"). Most individual posts average a few hundred page views, but our most popular posts have been read by thousands: e.g., "Motivating Students to Learn" has received 4,123 pageviews, "Breaking the Ice" 3,744; and "Handling Wrong Answers" 1,972. In 2014-2015, our most popular new posts were "Facilitating Challenging Conversations in Your Classroom" (722 pageviews) and "Student Notetaking: Is the Pen Mightier Than the Keyboard?" (650 pageviews).



Online Workshops

In addition to using the CRLT website to deliver resources and timely strategies to instructors, we have begun offering online workshops to U-M instructors as a supplement to our face-to-face programs. The online workshops present evidence-based practices for specific teaching goals, engage participants in thinking individually about teaching topics, and facilitate the exchange of ideas among participants through blogging and commenting, recreating key benefits of face-to-face workshops in an online environment. Busy instructors who may not be able to attend workshops in person appreciate the opportunity to attend online workshops during the term as well as during break periods when other workshops are not typically offered. The online workshops are based on a flexible template that can easily be adapted to different content, making the development of additional online workshops efficient. (For a list of offerings in 2014-2015, please see p. 23.)

Digital Education

Through consultation services, faculty development programs, and service on university- and unit-level committees (see *Committee Work*, p. 57), CRLT staff help individuals and academic units explore, integrate, and evaluate the use of instructional technology (IT). Several programs from the 2014-2015 academic year are highlighted below. (See also the list of collaborations with Digital Education & Innovation, p. 59.)

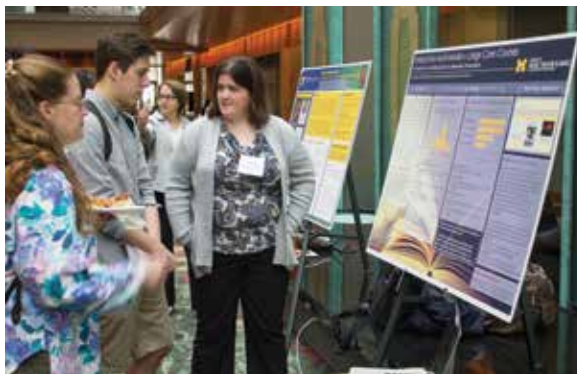
Campus-Wide Committees and Initiatives

With their focus on best teaching practices and their experience with program evaluation, CRLT staff play a key role in university-wide initiatives around IT.

CRLT staff were part of the Digital Innovation Advisory Group (DIAG), which provides guidance and leadership to advance the institution's digital education strategy and ensure engagement of faculty, staff, and students in innovative experimentation and knowledge sharing across U-M. A key question in 2014-2015 was whether and how to adopt the Canvas Learning Management System (LMS) at U-M. CRLT regularly provided reports from the evaluation of the Canvas pilot and engaged in discussion with DIAG to inform their recommendations.

CRLT's evaluation of Canvas in fall 2014 and winter 2015 brought together the important voices of faculty, students, and staff to offer a holistic perspective on the benefits and costs of changing the LMS for teachers, learners and support staff. Close attention to the experiences of early adopters revealed considerable buy-in among pilot faculty and students and ultimately led to a recommendation by DIAG, endorsed by the Provost, to adopt Canvas for all course sites by Fall 2016. Additionally, findings from the pilot evaluations have informed communications and support for faculty and GSIs transitioning in 2015-2016. (For a full description of these evaluation projects, see p. 29.)

One of three labs within DEI, the Digital Innovation Greenhouse (DIG) project identifies promising educational innovations from U-M's research community and provides support to bring them to a larger scale. Leveraging CRLT's experience with creating faculty learning communities around new technologies (especially the online tools collaboration group that influenced the roll out of Google tools to the U-M community), DEI is creating a Communities of Practice Team Lead who will develop faculty learning communities around projects in the greenhouse. In 2014-2015, projects focused on leveraging learning analytics data to personalize education at U-M by expanding ECoach, modernizing the Academic Reporting Toolkit (ART 2.0) and developing an interface for students to see data previously only available to faculty, and expanding the use of Student Explorer (an early warning system for academic advisors).



As a charter member of U-M's Teaching and Technology Collaborative (TTC), CRLT co-sponsored the 18th Annual Enriching Scholarship Conference, a week of workshops and demonstrations about technologies for teaching and learning. CRLT staff co-organized the opening event, including a poster fair of work by recipients of the U-M Provost's Teaching Innovation Prize, CRLT's Investigating Student Learning Grant, and TTC projects. The keynote panel, "A Discussion About Unizin: Positioning U-M for the

Future and Building Our Digital Education Ecosystem,” was moderated by James Hilton and featured Indiana University’s Stacy Morrone, Associate VP of Learning Technologies, and Unizin CEO Amin Qazi. CRLT also sponsored eight sessions on teaching with technology as part of the conference.

Discipline-Specific Services for IT

CRLT responds to the specific needs of individual departments, schools, and colleges by creating customized programs on instructional technology. In 2014-2015, CRLT staff worked on IT programs and assessments in LSA and CoE academic advising, civil and environmental engineering, information, kinesiology, mechanical engineering, medicine, music, nursing, pharmacy, and statistics. Designed with input from faculty steering committees, these programs are particularly effective in helping faculty think carefully about the pedagogical variables affecting the success of incorporating new IT into their courses and curricula. CRLT staff consult also with faculty academic administrators on ways to incorporate and evaluate IT innovations.

CRLT Programs and Resources Incorporating IT

CRLT incorporates opportunities for instructors to explore and learn about IT within programs for instructors at all stages of their careers.

CRLT grants fund a wide-range of IT projects proposed by faculty. In 2014-2015, about 30% of the funded grants and awards involved IT projects such as apps, blended or flipped courses, digital resources for students and instructors, online student projects, and multimedia production. (See p. 40 for a full list of grants.)

CRLT’s Preparing Future Faculty (PFF) programs for graduate students and postdocs model effective use of instructional technology and focus on IT that participants may use in their own future teaching. For example, the May PFF Seminar includes presentations

by faculty whose innovative pedagogies incorporate technology, and the Postdoc Short Course is run in a “flipped” environment, with participants watching screencasts beforehand and then spending meeting time actively engaged in applying what they learned. In addition, an online version of the course was developed and will be piloted in fall 2015.

The GTC+ Digital Media Teacher Certificate Program awarded its first three certificates in spring 2015. This program provides graduate students with structured opportunities to engage with current scholarly conversations about the ways digital environments shape our thinking and practice as teachers and learners. (For more information, see p. 18.)

Each fall and winter term, CRLT’s Seminar Series features several programs on IT topics. This year, for example, the series included a faculty learning community on teaching in a flipped classroom, “Active & Engaged Learning in Digital Contexts,” “Engaging the World From Your Classroom,” “Organize, Streamline and Simplify: Teaching Efficiently With Technology,” and “Teaching With Technology: How Can I Include All Students?” (See p. 14 for a full list of seminars.)

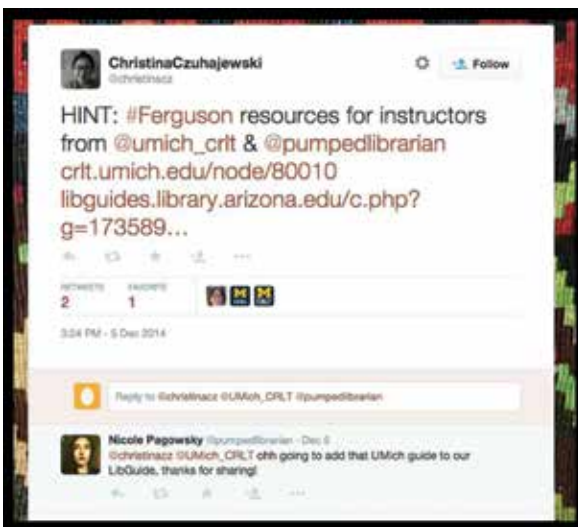
Additionally, CRLT has continued to identify faculty development topics that can be engaged with in an online setting. We now have four fully online workshops in rotation: “Engaging Students in Learning,” “Researched-Based Practices for College Teaching,” “Using Technology to Check Student Understanding and Provide Feedback” and “Writing and Grading Exams.”

For new faculty and GSIs, CRLT organizes orientation programs and teaching academies that feature sessions on getting started with IT at U-M. Co-facilitated by experienced instructors, these mini-workshops allow participants to choose the specific technologies (e.g., CTools, Canvas, clickers, screencasting) they wish to explore in more depth. (See pp. 13 and 15 for more on orientations and academies.)

Diversity *and* Inclusion



CRLT staff develop and facilitate programs and services to help individual instructors, departments, and schools and colleges address multicultural issues, promote learning that draws on social and intellectual diversity, and promote inclusive teaching. These elements are embedded in all the work we do. In addition, we have programs to promote effective teaching in those areas of knowledge where social differences are explicitly part of the curricula, and we help instructors develop and teach skills needed to navigate differences and promote social justice.



In 2014-2015, CRLT worked with the Provost's Office on two initiatives designed to promote diversity and inclusive teaching practices across the university.

The Faculty Communities for Inclusive Teaching grant was developed and administered by CRLT, with funding from the Vice Provost for Equity, Inclusion, and Academic Affairs Robert Sellers. In addition, CRLT staff work with a university-wide committee convened by Vice Provost Sellers to propose a model for faculty professional development around inclusive teaching (see p. 8).

Following are some additional, specific ways in which CRLT staff promoted inclusive teaching and learning at U-M during the 2014-2015 academic year:

- Development and facilitation of approximately 15 customized programs for GSIs and/or faculty in particular disciplines to develop their skills in attending to social identities and other differences in the classroom, cultivating inclusive learning environments, or handling difficult moments.

“ The workshop was a total success! It's got our hallways buzzing with energy. It has certainly jumpstarted important conversations.

Faculty Participant ”

- Collaboration with Student Life to disseminate in faculty workshops information about the newly-developed Change It Up program, which trains students to respond effectively as bystanders to bias incidents on campus.
- Direction of a learning community, in collaboration with The Program on Intergroup Relations (IGR), and sponsored by the LSA associate dean's office, for faculty teaching multicultural or social justice content to develop skills in facilitating student dialogue and to promote deeper student engagement in class discussion. (See Faculty Learning Communities, p. 17.)
- Consultations for individual instructors, and for departments and units on campus, on ad-

dressing diversity issues arising in instructional contexts.

“ I cannot thank you enough for the deep and honest conversations held, and the excellent leadership provided by the CRLT consultants, during our retreat! The tone you set and the gentle touch you had, while at the same time urging us to dig deeper and listen better, made all the difference.

Department Chair

- Dissemination of information and resources about inclusive teaching and diversity during Teaching Academies, New Faculty Orientation, and GSI Teaching Orientations (including development of a required workshop on inclusive teaching for all attending the GSI teaching orientations).
- Presentation of pedagogical workshops as part of CRLT’s seminar series on the impact of campus climate on classrooms, strategies for leading discussions about diversity, practice teaching for inclusive classrooms, facilitation skills for diversity and inclusive teaching, creating a classroom environment in which all students can succeed, using videoconferencing to engage the world with your classroom, and creating inclusive classrooms when using technology.

“ Walking through different inclusive teaching strategies was really helpful instead of just talking about them. I really liked getting to try out each of the activities. The concept map and voices activities were great. I am really excited to try these out in my classroom.

Seminar Participant

- Service on university-wide or college committees that address issues of diversity, including the Academic Services Board and the vice provost’s task force on designing faculty professional development programs in inclusive teaching.
- Development and performance of a new CRLT Theatre script and facilitation for faculty and GSIs to examine ways of responding to student mental health challenges.

“ This blog is terrific. I’ve had student veterans in class, and your post is not only really appropriate and helpful, but I appreciate that you also use what could benefit student veterans more broadly -- in other words, by reminding us that any returning student or student older than traditional college age might feel excluded by certain questions or assumptions. I imagine folks who don’t have student veterans in their classes now (or who don’t know they do) would find this blog refreshing and helpful, too. Thanks!

Faculty Member



CRLT Players Theatre Program

What people are saying
about the CRLT Players

"I just wanted to compliment you once again on your excellent portrayals of the students in the CRLT mental health sketches. I'm so pleased that CRLT is doing this important work, and even more pleased that the actors involved are providing an accurate and multi-layered depiction of mental health concerns in a classroom setting."

[The discussion following the *Critical Differences* performance] was one of the most engaged conversations my department has had about teaching in the two decades I've been here. I think it formed terrific groundwork for more to come. Thank you!"

The entire event was outstanding, from the way in which it was introduced with relevant background information, to the skits which were performed amazingly (truly), to the facilitation of the discussion.....I really appreciated the opportunity to be a part of it and see that segments of the University/College are taking significant strides at trying to address key contentious issues in creative ways."

"Actors are amazing. This is excellent. More of these sessions please."

"Just a moment to pause in our very busy schedules to say thank you for two really terrific evenings working with our faculty on the tenure review process. I feel very fortunate to have all of you as partners in working on the tricky process of encouraging fairer reviews of our faculty."

The CRLT Theatre Program explores ways that the performance arts can offer insights into pedagogical practices, enhance teaching and learning, support diversity, and improve institutional climate at U-M. The program is funded primarily by the Office of the Provost, the College of Engineering, the College of LSA, and the U-M ADVANCE Program.

Using local professionals and student actors, the CRLT Players present provocative and interactive sketches, vignettes, and traditional theatre productions that fall under two main headings: teaching and faculty worklife. The teaching sketches address issues of pedagogy, diversity, and inclusion in university settings, ranging from classrooms to labs and clinics. Sketches about faculty worklife are developed in collaboration with ADVANCE and cover topics such as faculty hiring, career advising, and the tenure decision-making process. All CRLT Players scripts are based on a solid foundation of research on the experiences of students, faculty, and administrators at U-M and nationally. The Players perform at large, campus-wide events (such as New Faculty Orientation); at workshops and retreats for academic departments, schools, and colleges; and at special events, such as a dinner organized by the dean of LSA for faculty serving on executive committees in the college. In addition, the Players are in demand nationally, performing for campuses and conferences around the country.





In Fall 2014, the CRLT Players Theatre Program received the U-M Distinguished Diversity Leaders Award for their serious and sustained efforts in improving campus climate and institutional equity over the past fifteen years. Throughout the 2014-2015 academic year, the Players continued their work in these arenas, supporting a range of college and departmental programs and customizing workshops to meet the particular needs of individual units. They also strategically expanded their repertoire to meet the identified needs of our campus population.

“Congratulations to you and the CRLT Players for the Distinguished Diversity Leaders Award! Having “uncomfortable” conversations is the only way to raise awareness of our own biases, and the Players make these conversations much more “comfortable” and I am sure lead to real change in our own understanding of bias and the hurdles we face as an institution as we attempt to create a diverse and just society.

Faculty Member

”

Answering faculty’s call for skill-building around student mental health issues and building upon research conducted in 2013-14, the Players developed a series of vignettes to seed conversation about instructors’ responsibilities to students facing mental health challenges. This new material was presented in a series of previews in 2014-2015 to key

university stakeholders, resulting in the creation of a session that aims to guide participants in proactively shaping their pedagogical practices with an awareness of student mental health concerns. Received positively in a spring pilot performance for GSI Coordinators, *Distress Signals* will be rolled out in CoE and LSA in 2015-2016.

Recognizing that positive cultural change is as much about deepening existing conversations as starting new dialogues, the Players also revised a principal piece of their repertoire. For the past decade, *The Fence* has been used as a tool for engaging faculty and administrators in a consideration of barriers to equity in the promotion and tenure process. In this time, audiences have developed a greater awareness of the problems of implicit bias and the necessity of structured decision-making. This increase in awareness demanded a more sophisticated tool to meet the university community’s current needs. Drawing on their own extensive experience facilitating dialogue around this topic and feedback from a faculty focus group, the theatre team created a new version of *The Fence* that introduces a greater degree of complexity to the consideration perennial challenges that emerge in the tenure and promotion process.

In the 2014-15 academic year, the CRLT Players performed 46 times on campus for over 2,600 audience members. The Players also continue to be a national resource, recognized for their unique ability to spark productive discussions about issues of classroom and institutional climate. This year they performed at the following six campuses:

- Brown University
- Rochester Institute of Technology
- Georgia Institute of Technology
- Kansas State University
- University of Oklahoma Health Sciences Center
- Oakland University William Beaumont School of Medicine

Assessment and Research

Services for Assessment of Student Learning

www.crlt.umich.edu/assessment

During the 2014-2015 academic year, CRLT staff worked with faculty and academic units to review their current courses and curricula, develop new curricular offerings, and assess the results of course and curricular innovations. Services included assistance with data collection and analysis, consultations on evaluation plans for grants, facilitation of faculty discussions, and provision of funds through CRLT's grants programs. All of CRLT's assessment projects have three defining characteristics:

- 1) They are initiated by faculty responsible for the curriculum or the courses being assessed, with CRLT providing support and expertise as necessary.
- 2) Projects focus on improving U-M student learning experiences or outcomes.
- 3) They are action oriented, generating data that can be used by faculty and faculty committees to improve their courses or curricula.

CRLT worked on assessment initiatives for all 19 schools and colleges, as well as the provost's office.

Campus-Wide and Multiple Unit Assessment Initiatives and Services

Transforming Learning and Teaching for a Third Century (TLTC)

Since 2013, CRLT staff have consulted with nearly 40 teams about assessment for their TLTC proposals or funded grants. Of the nine Transformation grants funded by May 2015, CRLT contributed substantially to the proposals of six:

- The Citizen Interaction Design Program
- Engaging the Archives
- Gameful Assessment in Michigan Education (GAME)
- Interprofessional Health Education and Collaborative Care

- Michigan Engaging Community in the Classroom
- Practice Sessions (initially titled Master Class)

At the proposal stage, the types of assistance provided by CRLT ranged from consultations about project design and assessment, to provision of resources, performing literature reviews, locating measurement instruments, and drafting and revising assessment plans. For funded projects, CRLT contributions included developing survey instruments or rubrics, conducting focus groups, and drafting applications for exemption from IRB. Details for funded projects specific to a single unit appear in the list of department, school, and college discipline-specific projects (p. 31; see p. 9 for infrastructure details).



Funded TLTC projects that spanned two or more colleges are listed below:

- Gameful Assessment in Michigan Education (information, education, LSA): CRLT staff co-investigator
- Interprofessional Education (dentistry, kinesiology, medicine, nursing, pharmacy, public health, social work): CRLT staff consulted on assessment and provided follow-up resources. CRLT staff also consulted with the teaching team for the Team-Based Clinical Decision

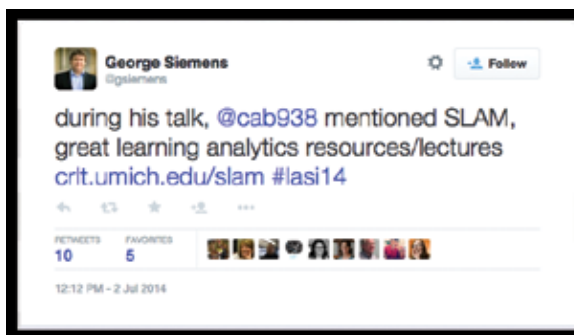
Making course about collecting feedback on the course from students (including organizing the collection of student data) and on the future faculty development needs of the teaching team.

- Medical Device Sandbox (engineering, medicine): CRLT staff drafted an assessment plan for the proposal, assisted with IRB approval, conducted a focus group, and assisted with survey development and analysis.
- Michigan Engaging Community Through the Classroom (architecture and urban planning, engineering, public health, public policy): CRLT staff consulted on the project proposal and assessment. After the proposal was successfully funded, CRLT staff developed a detailed assessment plan and assisted with midterm student feedbacks and implementation of the plan.
- Tactile Technologies for Play and Learning (architecture and urban planning, engineering): CRLT staff assisted with IRB approval, as well as survey and focus group development.

Student Learning and Analytics at Michigan (SLAM)

Learning analytics aim to improve student learning through the analysis of “big data” collected from a variety of sources (e.g., registrar data on student backgrounds or data from a course management system). As part of U-M’s Third Century Initiative, the provost charged a Learning Analytics Task Force with “designing a program of activities to draw out, support, and execute the best ideas in learning analytics at Michigan.” For a third year, CRLT collaborated with task force chair Professor Tim McKay on a 13-session **SLAM Speaker Series**. In addition to providing examples of ongoing analytics work being pursued by practitioners at U-M, the series hosted speakers from Caltech, Stanford, the University of Texas, and Michigan State. (See p. 14 for a full list of topics.)

The overall attendance at the SLAM seminars was 450. This year’s attendance represents participation from most (13) U-M schools and colleges, including 22 LSA and 10 engineering units.



Additionally, the SLAM website, which is housed at CRLT and offers links to video recordings and slide presentations, received over 9,000 hits in 2014-2015. The SLAM recording of “Education Without States,” a presentation by Mitchell Stevens (Stanford University), was viewed more than 1,200 times on YouTube. The evaluations for the SLAM Speaker Series were extremely positive, with participants expressing strong agreement about its usefulness.

Digital Education

Canvas

In 2014-2015, U-M piloted the Canvas learning management system (LMS) adopted by the Unizin Consortium. CRLT collaborated closely with ITS from the initial phases of the pilot to evaluate the utility of Canvas for teaching and learning at U-M. Specifically, CRLT interviewed pilot faculty, surveyed instructors and students, and conducted focus groups with students and unit staff who support Canvas in order to identify any shortcomings of Canvas and to surface early successes with Canvas (see p. 17). The evaluation also gathered information about the support needs of Canvas users and the timeline for Canvas adoption. A large majority of pilot faculty and students reported that they preferred Canvas to CTools and that many of the features unique to Canvas, such as Speedgrader and Modules, improved the efficiency of teaching workflows and/or were valuable for innovative teaching approaches. Students reported that they appreciated Canvas’s mobile app and convenient notifications. Faculty teaching large courses identified

issues with gradebook and overall performance in Canvas, and these issues were brought to the attention of the vendor and ultimately resulted in improvements in Canvas to mitigate the issues. Overall, the pilot evaluations provided essential information from faculty, students and support staff to inform decisions about next steps for Canvas at U-M. Complete reports for the Fall 2014 and Winter 2015 pilot can be found on CRLT's website, crlt.umich.edu/node/89707.

In addition to the evaluation of the LMS platform itself, CRLT convened faculty and staff to rapidly evaluate a tool for migrating CTools courses to Canvas. This evaluation informed ITS's development of the Convert2Canvas services and communications to instructors about how to move their CTools courses to Canvas.

DEI Academic Innovation Fund (formerly DEI Venture Fund)

CRLT conducted three student focus groups to inform the work of the Michigan Entrepreneurship Greenhouse, sponsored by the Zell Lurie Institute, the School for Public Health, the Center for Entrepreneurship, and the Law School's ZEAL clinic with funding from the DEI Venture Fund. The Greenhouse team intends to create a set of online resources to support student entrepreneurship and innovation at Michigan. The focus groups were designed to prompt student reflection on the entrepreneurial process to inform the design of the initial online modules.

Digital Innovation Greenhouse

CRLT staff conducted a focus group with engineering advisors regarding their use of Student Explorer to shape future development of the tool.

Michigan Education Through Learning Objects (MELO)

CRLT staff developed an online toolkit to support evaluation of tools created by MELO initiative. <http://melo.lsa.umich.edu/assessment>

Investigating Student Learning (ISL)

CRLT coordinates this annual grant competition, consults at least twice with project teams, and works even more intensively with many. About 10 projects each year are led by teams of faculty and graduate students or postdocs who are participating in the scholarship of teaching and learning (SOTL). Projects adhere to the following three criteria: 1) they are inquiry based, posing questions about problems or issues in teaching and learning and exploring practices that promote, deepen, or otherwise improve learning; 2) they use methods appropriate to the discipline in order to find answers to the questions posed; and 3) they are designed to be made public so that results can inform the work of colleagues and the discipline more broadly. Among other avenues, grantees share their results at a poster fair held in conjunction with the keynote address for Enriching Scholarship each May. CRLT provides significant assistance in the design of projects, presentation of findings and the design of posters. For titles of 2015 grant recipients' projects, please see p. 43. Descriptions of how CRLT worked with ISL grant winners can be found below.

Midterm Student Feedback and Course-Level Assessment

CRLT provides confidential, course-level assessment through its midterm student feedback (MSF) service, which allows faculty and GSIs to receive data from students on the effectiveness of their teaching during the term while they still have time to implement changes to improve their courses. In 2014-2015, CRLT conducted MSFs for 408 instructors, allowing nearly 15,000 students to provide feedback on the effectiveness of their courses. For more details, see p. 12.

Evaluation Research for Education Grants

CRLT staff consulted with faculty applying for internal and external grants in areas related to curricular and pedagogical innovation. Faculty sought external grants from organizations such

as the Japan Foundation, the Mellon Foundation, the National Science Foundation, and the National Institutes of Health.

CRLT's director of assessment and other CRLT consultants worked on grant design, implementation, and evaluation issues with a variety of departments, administrators, faculty members, and staff. (See units listed below.)

Department, School, and College Assessment Projects

Architecture & Urban Planning

TLTC projects:

- Cleveland Design Lab: CRLT staff conducted several midterm student feedback sessions.
- Interactive Satellite Solar Lab: CRLT staff assisted with survey development.
- Michigan Engaging Community Through the Classroom (see pp. 28-29)
- Practice Sessions (formerly Master Class): CRLT staff drafted an assessment plan for the project proposal and assisted with IRB approval. After the proposal was successfully funded, CRLT staff conducted observations and a focus group to support project assessment.
- Tactile Technologies for Play and Learning (see pp. 28-29)

Art & Design

CRLT staff consulted on assessment of the school's social engagement requirement and, separately, on curriculum design for new master's program in design.

Business

CRLT staff conducted a set of one-on-one interviews with faculty to evaluate the instructional experience in the pilot BA200 course, *Businesses and Leaders: The Positive Difference*. The report helped frame the revision process for the fall 2015 offering of this important gateway course.

CRLT staff also conducted focus groups to inform the DEI-funded "Design Your Own Entrepreneurship Adventure" project for which the Zell Lurie Institute is a co-sponsor (see p. 30).

Dentistry

TLTC project on Interprofessional Education (see p. 28)

CRLT staff assisted with data analysis regarding the long-term impact of an introductory course on critical thinking. The results were presented at a poster session at the 2015 American Dental Education Association Annual Session and Exhibition.

CRLT staff consulted on instruments for evaluation of faculty preparation to teach Motivational Interviewing curriculum.

CRLT staff conducted focus groups with students on barriers to engaging in interprofessional education courses. Data informed revisions to elective offerings for interprofessional education.

CRLT staff reviewed a survey to assess dental service learning activity.

CRLT staff provided feedback on student master's thesis survey and, separately, served on a dissertation committee.

Hsun-Liang Chan and Tae-Ju Oh received a 2015-2016 Investigating Student Learning Grant to investigate the gap between dental students' acquisition of knowledge about evidence-based practice and their ability to deploy it in clinical scenarios. The faculty participated in the May 2015 ISL Symposium and had individual consultations with CRLT staff about their project. Their work was presented at the June 2015 Health Professions Education Day.

Education

TLTC project *Gameful Assessment in Michigan Education (GAME)*; see pp. 28-29)

Engineering

TLTC projects (see pp. 28-29):

- Medical Device Sandbox
- Michigan Engaging Community Through the Classroom
- Tactile Technologies for Play and Learning

CRLT staff assisted with an assessment plan for NIH R25 grant, Clinical Immersion and Experiential Learning in Medical Product Innovation.

CRLT staff consulted on a student learning study for a dissertation.

CRLT staff also conducted focus groups to inform the DEI-funded “Design Your Own Entrepreneurship Adventure” project for which the Center for Entrepreneurship is a co-sponsor (see p. 30 above).

CRLT staff consulted on six projects from the 2014-2015 Investigating Student Learning Grants cohort and highlighted them at the poster fair that opened U-M’s 2015 Enriching Scholarship conference. **Amy Cohn** and **Michelle Macy** assessed the impact of cross-disciplinary, project-focused, action-based immersive learning experiences in healthcare and engineering. **Matthew Collette** studied how naval architecture students mentally synthesize multiple analysis methods and data sources. CRLT staff assisted with inter-rater reliability statistics. Collette’s results were presented in a paper at the 2015 International Marine Design Conference. **Aline Cotel** is assessing the impact of the international professional organization, Society of Women Engineers, and how an international partnership of student organizations can influence the experience and international perspective of U.S. and Liberian students. Cotel presented a paper on her project at the 2014 Annual Meeting of the American Physical Society Division of Fluid Dynamics. **Brian Gilchrist**, **Gail Hohner**, and **Joy Adams** investigated the impact of supplementing individualized, quantitative peer feedback with qualitative peer feedback on the acquisition of technical and interpersonal skills. A paper on the project was presented at the 2015 ASEE Annual Conference. **Frank Marsik** evaluated the effectiveness of Engineering 290, “Professional Skills for Engineers” on improving the technical communications proficiency, and overall self-efficacy, of first-term undergraduate engineering transfer students. **Dimitrios Zekkos**

assessed the impact of incorporating web-based class projects on the learning of civil and environmental engineering (CEE) students. Results were presented at the 2015 ASEE Annual Conference.

Members of three projects funded through the 2015-2016 Investigating Student Learning Grants competition participated in the May 2015 ISL Symposium and had individual consultations with CRLT staff about their projects. Robin Fowler is analyzing relationships between team make-up and resulting team performance and satisfaction. Joanna Millunchick is exploring whether mechanical engineering students are more likely to misinterpret computer-based analyses than manual calculations. Michael Thouless is comparing the performance of students who take ME 211 Introduction to Solid Mechanics in a single semester against that of students who cover the material at half the pace (i.e., over the course of two semesters), with more time for reflection and absorption.

Information

TLTC projects:

- The Citizen Interaction Design Program: CRLT drafted an assessment plan for the Discovery Grant proposal.
- Gameful Assessment in Michigan Education (GAME) (see p. 28)

CRLT staff also consulted on an assessment plan for study abroad experiences.

Kinesiology

CRLT staff evaluated curricular integration in movement science.

TLTC projects:

- Hybrid Modular Courses: CRLT staff assisted with proposal writing and consulted about assessment, assisted with IRB approval, and conducted multiple midterm student feedback sessions.
- Interprofessional Education (see p. 28-29)

Law

CRLT continued an evaluation of the Michigan Access Program (designed to promote multi-cultural leadership skills among first-year law students) by conducting a survey after the pre-orientation session and preparing a final report.

Assessments of three new curricular initiatives for first-year students (lab modules, Unemployment Insurance Clinic, and supplementary writing instruction) were carried out by CRLT staff at the request of the associate dean for experiential education. Over two semesters, CRLT surveyed students in four courses implementing new lab modules (three sessions of practice-based writing and discussion), and interviewed faculty involved in the project. Together with registrar data, the analysis supported the curriculum committee's successful application for a TLTC Transformation grant, Reimagining Legal Education. CRLT assisted with data analysis that will also be used by two instructors for a manuscript.

Evaluation of the Unemployment Insurance Clinic (UIC) entailed surveys of both participating and non-participating students, two focus groups with students and student supervisors, instructor interviews, and initial and final reports. Key findings about this successful attempt to frontload students' clinical practice ("learning to be") before doctrine ("learning about") will be shared with the broader campus via a CRLT blog post in fall 2015 (crlt.umich.edu/node/86663).

To evaluate supplementary writing instruction, CRLT staff collected student perspectives about and writing outcomes from workshops that focused on developing persuasive legal writing skills. The report drew on surveys of students at the completion of the workshops and compared the persuasive legal writing of participants and non-participants. Since the study, the Law School has invested in new resources for developing law students' legal writing skills.

CRLT staff also conducted focus groups to inform the DEI-funded "Design Your Own Entrepreneurship Adventure" project for which the Entrepreneurship Clinic is a co-sponsor (see p. 30).

LSA: Asian Language & Cultures

A CRLT report was submitted to the Japan Foundation regarding the Year 2 evaluation of the new master's curriculum "Reimagining the Master of Arts in Japanese Studies," based on interviews with MA fellows and midterm feedback from students in new courses.

LSA: Astronomy

TLTC project Inquiry-Based Learning--Astronomy: CRLT staff consulted about the project's assessment and followed up with resources.

LSA: Comprehensive Studies Program (CSP)

Cindee Giffen received a 2015-2016 Investigating Student Learning Grant to develop a concept inventory to foster student success in Introductory Biology. She participated in the May 2015 ISL Symposium and had individual consultations with CRLT staff about the project.

LSA: Dean's Office

CRLT staff made presentations about CRLT assessment services or projects to LSA Undergraduate Education (institutional data available to departments) and to LSA advisors (pathways project).

For a project to decrease class size in selected disciplines, CRLT staff summarized the literature on the effect of class size for the associate dean, in addition to creating and submitting the IRB protocol for the project. Evaluation of smaller section sizes in Spanish and German in winter 2015 entailed analysis of data from 4 student focus groups, 10 instructor focus groups, grades, registrar data, and end-of-term evaluation data.

CRLT staff helped facilitate a focus group for optiMize Social Innovation.

LSA: English

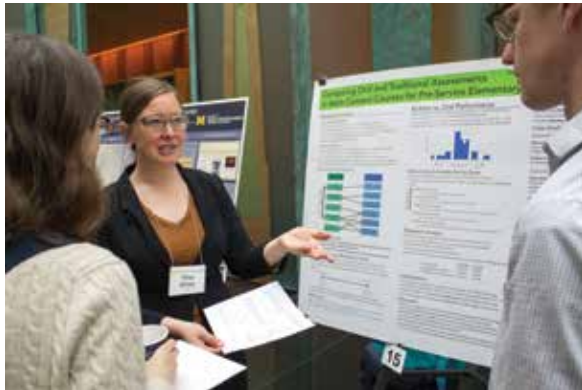
A climate survey for undergraduate majors was designed by CRLT staff, and the resulting report informed future planning.

LSA: History

TLTC Project Engaging the Archives: CRLT staff drafted an assessment plan for the proposal, assisted with IRB approval, and helped with interview protocol development.

LSA: Mathematics

CRLT staff consulted with Nina White and Daniel Visscher, recipients of a 2014-2015 Investigating Student Learning Grant, on their project comparing oral and traditional assessments in



math content courses for pre-service elementary teachers. CRLT highlighted this project at the poster fair that opened U-M's 2015 Enriching Scholarship conference.

LSA: Molecular, Cellular, and Developmental Biology (MCDB)

Laura Olsen and Cynthia Giffen received a 2015-2016 Investigating Student Learning Grant to develop a tool assessing undergraduates' readiness for Introductory Biology. They participated in the May 2015 ISL Symposium and had individual consultations with CRLT staff about their project.

LSA: Political Science

TLTC project Gameful Assessment in Michigan Education (GAME; see p. 28)

LSA: Residential College

CRLT staff collaborated with LSA on a workshop related to writing and assessing learning objectives.

LSA: Romance Languages

CRLT staff assessed Spanish 232 students' satisfaction with newly adopted workbook and classroom activities.

LSA: Sociology

CRLT staff are conducting the evaluation of the NIH R25 grant, Dynamic Systems Science Modeling for Public Health.

LSA: Statistics

CRLT staff consulted with Brenda Gunderson, recipient of a 2014-2015 Investigating Student Learning Grant, on her students' expansion of the current Problem Roulette database. CRLT highlighted this project at the poster fair that opened U-M's 2015 Enriching Scholarship conference.

Jackie Miller received an Investigating Student Learning Grant to examine a flexible blended model of instruction in a large enrollment undergraduate statistics course. She participated in the May 2015 ISL Symposium and had individual consultations with CRLT staff about her project. CRLT staff also conducted two focus groups for the project.

Medicine

TLTC projects (see pp. 28-29):

- Interprofessional Education
- Medical Device Sandbox

CRLT staff consulted with **Mary Blazek**, recipient of a 2014-2015 Investigating Student Learning Grant, on a project which intermittently emailed third-year medical students to remind them to apply key psychiatric concepts during non-psychiatric clerkships. In addition to conducting two focus groups, CRLT highlighted this project at the poster fair that opened U-M's 2015 Enriching Scholarship conference, and also assisted with a manuscript for Medical Teacher.

Members of two projects funded through the 2015-2016 Investigating Student Learning Grants competition participated in the May 2015 ISL Symposium and had individual consultations with CRLT staff about their projects. **Adrienne Haggins** and **Helen Morgan** received a 2015-2016 Investigating Student Learning Grant to explore factors affecting underrepresented minority undergraduates' persistence in pre-med career paths. CRLT staff assisted with development of focus group and interview protocols. **Anne Sales** is identifying factors that affect student engagement and learning outcomes as a blended course scales from 25 to 100 participants.

CRLT staff conducted two separate evaluation projects: two focus groups with pediatric residents about current and future curricula for Pediatric Community Health rotation, and a pilot project for peer observers of clinical teaching. For the latter project, CRLT staff created a training workshop on using a particular instrument for peer observations; collected and analyzed data about the utility of the instrument, the training, and the experience of observing/being observed.

Music, Theatre & Dance

TLTC project ArtsLab: CRLT staff drafted an assessment plan for the project.

CRLT staff consulted with Mark Clague, recipient of an Investigating Student Learning Grant, on his project which compared students' use and perceptions of traditional paper textbooks and optional e-text modules. CRLT highlighted this project at the poster fair that opened U-M's 2015 Enriching Scholarship conference.

Natural Resources and Environment

CRLT staff assisted with an NSF proposal on evaluation of undergraduate research experiences by providing an evaluation plan and resources.

Nursing

TLTC project Interprofessional Education (see pp. 28-29)

CRLT staff consulted on evaluation of the Clinical Learning Center.

An assessment plan for the school's PhD program was created by CRLT in collaboration with the director of the program.

Norma Sarkar, Judith Policicchio, and Nancy (Amby) Gallagher received an Investigating Student Learning Grant to compare the effects of three different global immersion strategies on students' cultural care competencies through changes to and development of their knowledge, skills, attitudes, and behaviors. They participated in the May 2015 ISL Symposium and had individual consultations with CRLT staff about their project.

Pharmacy

TLTC project Interprofessional Education (see pp. 28-29)

CRLT staff consulted with **Barry Bleske**, recipient of a 2014-2015 Investigating Student Learning Grant, on his project comparing learning outcomes from lecture and team-based learning (TBL) in a randomized crossover study. CRLT highlighted this project at the poster fair that opened U-M's 2015 Enriching Scholarship conference.

Members of two projects funded through the 2015-2016 Investigating Student Learning Grants competition participated in the May 2015 ISL Symposium and had individual consultations with CRLT staff about their projects. **Sarah Kelling** is studying whether virtual medication dispensing simulation software can keep all students engaged, despite differing amounts of background professional experience that they bring to a required first-year course. **Gundy Sweet** is assessing the impact of an interprofessional team-based course on students' knowledge of health care professionals' roles.

CRLT staff also helped facilitate a retreat for all team-based learning (TBL) faculty after gathering student feedback from three current cohorts regarding the effectiveness of the teaching method.



Provost's Office

CRLT's support of the Transforming Learning for a Third Century (TLTC) Initiative focused on developing campus capacity around assessment of engaged learning. CRLT staff consulted with applicants and grantees about their assessment plans and provided feedback on approaches to data collection assistance with IRB applications. Further, TLTC assessment postdocs initiated an ambitious project to situate U-M's engaged learning goals in research and provide high-quality recommendations for assessment tools using local examples as well as established models. A project to develop an online and print "assessment toolkit" is underway. Throughout the year, CRLT staff coordinated with other campus stakeholders and organized multiple events with the goal of convening faculty and staff to share innovative approaches to engaged learning practice and assessment.

To inform future planning of U-M's Provost's Campus Leadership Program (PCLP), CRLT staff researched chair and associate dean training offered at other CIC and Ivy League institutions and interviewed current U-M chairs and associate deans about potential PCLP topics.

Public Health

TLTC projects (see pp. 28-29):

- Interprofessional Education
- Michigan Engaging Community Through the Classroom

CRLT staff also conducted focus groups to inform the DEI-funded "Design Your Own Entrepreneurship Adventure" project for which the school is a co-sponsor (see p. 30).

Public Policy

TLTC project (see pp. 28-29):

- Michigan Engaging Community Through The Classroom

Rackham

CRLT staff consulted on an evaluation plan for the Mellon Public Humanities Fellowship.

Social Work

TLTC project Interprofessional Education (see pp. 28-29)

CRLT staff consulted on an assessment plan for study abroad experiences.

CRLT staff consulted on options and tools for assessing cultural competence in a new course for undergraduate dental hygiene students as part of a Faculty Development Fund grant.

Other Units

English Language Institute

CRLT staff conducted focus groups and analyzed survey results for a report about classroom climate for international GSIs.

Erb Institute

CRLT staff provided feedback on an alumni survey.

Information and Technology Services (ITS)

CRLT staff designed and carried out evaluations of the Canvas pilot projects (see pp. 28-29).

Sweetland Writing Center

CRLT staff consulted on a peer tutor survey.

UMS Mellon Faculty Institute

CRLT staff made a presentation about assessment strategies and CRLT services.

CRLT Research

CRLT staff members (including associate and assistant research scientists and a research associate professor) are pursuing several research projects on teaching and learning topics of particular relevance to faculty and graduate students at U-M.



Robert J. Menges Award for Outstanding Research in Educational Development

CRLT staff were recognized at the annual meeting of the Professional and Organizational Development Network (POD) for “Leveraging Institutional Data to Demonstrate Our Impact: An Evaluation of a New Faculty Program.” This multi-method study utilized existing institutional data to evaluate the impact of a year-long, new-faculty program in relation to a naturally occurring control group. Data spanned a six-year range – pre and post the new program launch. The researchers found that participants in the year-long program demonstrated statistically better results than non-participants, feeling better prepared to teach, engaging in more educational development activities after their first year, and receiving higher student ratings. By using existing data, the

study provided a resource-efficient approach, and it contributed to limited, but growing, research on effective ways of assessing the impact of our programs which we can use to advocate for their value.

Better Than Expected: Using Learning Analytics (LA) to Promote Student Success in Gateway Science

CRLT staff jointly published with faculty in *Change: The Magazine of Higher Learning* a description of the development and implementation of a large-scale LA initiative at U-M. Learning analytics is a top technology trend in higher education that uses datasets generated through normal administrative, teaching, or learning activities to enhance student learning, academic progress, and teaching practice. Despite the promise of the approach, a key challenge is linking the large data analyses to actionable and effective interventions. To develop a rich, student-centered picture of effective strategies in introductory physics, the team analyzed 14 years of introductory physics course records, conducted exploratory interviews to better understand the performance of students who performed either far better or far worse than their pre-physics GPAs predicted, collected successful strategies from a diverse array of former students, and developed a personalized learning tool E2Coach (an Expert Electronic Coach). Current students can thus receive advice derived from former students who resemble them in salient ways, including preparation for physics, sense of self-efficacy, gender, and career plans. The article concludes with four strategies for more fully realizing LA’s potential to improve college-level learning by using large-scale data analyses to change the student experience.

Available: <http://goo.gl/xLXIHT>

Assessment for Improvement: Two Models for Assessing a Large Quantitative Reasoning (QR) Requirement

CRLT staff published in the journal *Numeracy* two models for assessing a large and diverse QR requirement at U-M. The models address two key

challenges: (1) dissemination of findings for curricular improvement and (2) resource constraints associated with measurement of large programs. Data collection approaches used include convergent validation of self-report surveys, as well as mixed methods and learning analytics. Strategies for disseminating findings included meetings with instructors to share data and best practices, sharing of results through social media, and use of easily accessible dashboards. These assessment approaches may be of particular interest to universities with large numbers of students engaging in a QR experience, projects that involve multiple courses with diverse instructional goals, or those who wish to promote evidence-based curricular improvement.

Available at: <http://scholarcommons.usf.edu/numeracy/vol8/iss1/art6>

Active Learning, Student Resistance, and Faculty Change

A three-year grant from the National Science Foundation's Widening Implementation and Demonstration of Evidence-Based Reports (WIDER) program is funding a study of the ways that engineering students' expectations regarding classroom pedagogy may be violated by innovative teaching approaches. The multi-institution team (Virginia Tech, Western Michigan University, Bucknell University, and North Carolina Agricultural and Technical State University) developed a series of student and faculty survey instruments that were piloted in four classes. Data will be collected from a national sample of 20 courses. The end goal of the work is a set of best practices to aid instructors in aligning their own expectations with those of their students, thereby lowering student resistance.

Faculty Teaching Practices That Support Student Success

In its fifth year, this NSF-funded project is designed to promote substantive and sustained changes in teaching practices in order to improve

student success and support a diverse student body in engineering. Work on the project in 2014-2015 included the collection of data from faculty participating in Teaching Circles for Large Engineering Classes (see p. 17) by means of interviews with faculty, as well as structured class observations that took place before and after the program.

Do Faculty Learn More from One-Off Workshops or Four-Session Learning Communities?

Leveraging direct and indirect assessment techniques, researchers at CRLT and Carnegie Mellon University investigated relative impacts on instructors' learning and subsequent teaching practices regarding "flipped classroom" pedagogies. Both institutions used two faculty development program formats, with some faculty participating in a one-off workshop while others participated in a four-session learning community. About 120 faculty members participated overall, with roughly equal participation across format types at each institution. Survey results indicated that the format did not affect the rate of change in faculty teaching practices, which was high for both types. Ideally, a center for teaching and learning (CTL) should offer a variety of formats because the needs and relative time constraints of faculty vary so broadly. Results will be presented at the 2015 national conference of faculty developers.

Impact of Rackham-CRLT Preparing Future Faculty (PFF) Seminar

Using aggregated job placement data from Rackham Graduate School and survey data, this research looked at the career trajectories and attitudes of two groups of U-M graduate students and postdocs. Responses from 199 graduate students who participated (56% response rate) in an intensive, 10-session PFF seminar offered each year between 2007 and 2013 were compared to 58 applicants who were not accepted to the program (31% response rate).

Initial placements in tenure-track positions were roughly equivalent for applicants and participants (approximately one-quarter of both groups had tenure-track placements). However, the PFF Seminar participants were more likely than applicants to have initial placements in either non-tenure-track faculty or academic administrative positions, although this difference was not statistically significant. It does, however, correspond to feedback from the participants about what they particularly valued from the seminar. Participants in the PFF seminar reported that exposure to a variety of institutional types led to a greater understanding of worklife at diverse institutional types and that exposure to faculty from different institutional contexts was useful to them in determining fit as they went on their academic job search.

Perceptions of Ongoing Professional Development Among Engineering Graduate Student Instructors (GSIs)

This study looks at the impact of three different types of pedagogical professional development opportunities on new engineering GSIs' satisfaction with their required training and confidence in their teaching abilities. After an initial orientation that provides training on best practices for learning and teaching and creates awareness of classroom climate issues, new GSIs have three choices for ongoing professional development training during the ensuing semester: 1) participating in micro teaching sessions; 2) attending an eligible seminar offered by CRLT-Engin or CRLT and submitting a written reflection; or 3) scheduling a midterm student feedback (MSF) and submitting a written reflection.

In 2014-2015, qualitative, thematic analysis was conducted focusing on reflections written by GSIs after attending an eligible seminar. GSIs were asked to compare and contrast the teaching-related strategies that were presented at the seminar and comment on their effectiveness for helping their students learn the content, skills, and mindsets within engineering. In addition, they were asked to select one strategy and explain how they could use it in their current or future teaching. We found that applied pedagogy seminars resonated more readily with the first-time engineering GSIs than did seminars raising awareness of topics like student mental health. It's also important to recognize that there are a variety of factors that may not have appeared in the written reflections that influence how GSIs are able to adopt strategies, including the nature of their GSI assignment, their disciplinary backgrounds, and their reasons for choosing particular workshops.

Results were presented at the CRLT in Engineering Ninth Annual Research and Scholarship in Engineering Poster Session and will be presented at the American Society for Engineering Education Conference in June 2015.

Additionally, in collaboration with faculty developers from UT-Austin, CRLT staff conducted a quantitative analysis comparing the differential impacts of a teaching orientation coupled with one of four instructional development programs. Results indicated that the MSF with written reflection had a comparable increase in a GSI's efficacy for reflection and beliefs about teaching as a stand alone pedagogy course that included MSFs. Results were presented at the 2015 American Education Research Association conference and will be revised for submission to a journal.

Appendix A: Grants and Awards

► Provost's Teaching Innovation Prize (TIP)

The Provost's Teaching Innovation Prize was created and funded jointly by the provost's office, the university library, and CRLT. TIP recognizes faculty who have developed innovative approaches to teaching that incorporate creative pedagogies, and it encourages the dissemination of best practices by sharing promising innovations with faculty more broadly. In 2015, five teaching innovations were chosen from among 57 faculty nominees. Winning faculty received a \$5,000 award for their original approaches to teaching and creativity in the classroom.

Provost's Teaching Innovation Prize Recipients, Winter 2015

1. Jill Halpern, *Mathematics and Comprehensive Studies Program*
Calculus in the Commons: Bringing Math to Life
2. Zachary London, *Neurology*
Teaching Medical Reasoning With EMG Whiz
3. Richard Norton and Paul Fontaine, *Architecture and Urban Planning*; Elisabeth Gerber, *Public Policy*; Gail Hohner, *College of Engineering Undergraduate Education*; Patricia Koman, *Public Health*; and Jim Kosteva, *Office Of Government Relations*
Generating Multidisciplinary Synergies Across Community-Engaged Courses
4. Burgunda Sweet, *Pharmacy*; Mark Fitzgerald and Domenica Sweier, *Dentistry*; Joseph House, Joseph Hornyak, and Jennifer Stojan, *Medicine*; Michelle Pardee and Cynthia Arslanian-Engoren, *Nursing*; Bruce Mueller, *Pharmacy*; Bradley Zebrack and Debra Mattison, *Social Work*; and Anica Madeo, *Center for Interprofessional Education*
Teaching Teamwork and Interprofessional Practice in Healthcare
5. Lisa C. Young, *Anthropology*
Re-Connecting Hopi Seeds: Creating Virtual Dialogues With a Source Community

► Faculty Development Fund

This fund provides grants for innovative projects that enhance teaching and learning. CRLT awards up to \$6,000 to individual faculty members or small groups of faculty who propose innovative revisions to courses or innovative course development (e.g., interdisciplinary courses) or who initiate other projects that improve the learning of a relatively small number of students. Grant awards up to \$10,000 are available to departments, programs, and other large faculty groups who want to collaborate on more extensive projects, such as curriculum development and evaluation, inclusive classrooms, novel applications and evaluations of instructional technology, non-traditional approaches to teaching, and GSI mentorship and training programs.

Faculty Development Fund Recipients, Winter 2015

1. Rolf Bouma, *Program in the Environment*
Ecology & Religion: Sustaining Visions for Earth's Future
2. Deborah Des Jardins, *English Language Institute*
A Service Learning-Based English Language Course for International Graduate Students at the University of Michigan

3. Adrienne Lapidos, *Social Work*
Skills for Patient- and Family-Centered Care with Diverse Populations: A Flipped Course Supporting Service-Learning
4. Kelly Maxwell, *Intergroup Relations*; robbie routenberg, *Global Scholars Program*; and Naomi Silver, *Sweetland Center for Writing*
Innovations in Inclusive Teaching: Development of Dynamic Pedagogical Tools and Faculty Communities of Practice
5. Jason McCormick and Sherif El-Tawil, *Civil and Environmental Engineering*
Connecting the Pieces: Enhancing Student Learning in Structural Design Courses
6. Candace Moore and Colin Gunckel, *Screen Arts and Cultures*
Cultivating Diversity in the Screen Arts and Cultures Curriculum
7. Chinedum Okwudire, *Mechanical Engineering*
Development of Course Content Connectivity Resources for the Mechanical Engineering Undergraduate Curriculum
8. Mateusz Ruzkowski, *Astronomy*
Bringing Astronomy Down to Earth: Transforming Introductory Astronomy Through Live Table-Top Demonstrations
9. Shari Saunders, *Educational Studies*
Using TeachLivE™ to Prepare Teaching Interns for the Social and Emotional Dimension of Practice
10. Bruce Tharp, *Art & Design*
Blended Learning across Design-Related Disciplines

► Gilbert Whitaker Fund for the Improvement of Teaching

The Office of the Provost finances the improvement of teaching through the Gilbert Whitaker Fund, which is administered by CRLT. Through Fall 2012, the competition entailed two stages. After securing Stage I funding, grantees had a two-year window to compete for Stage II awards. **The last Stage II competition for grants of up to \$15,000 was held in Fall 2014, honoring the terms of competition for the Fall 2012 Stage I grantees.**

Fall 2014 marked the transition to a single-stage competition offering two levels of funding. Faculty can apply for up to \$6,000 for smaller-scale projects or \$10,000 for larger-scale, collaborative projects.

Gilbert Whitaker Fund Recipients, Stage II, Fall 2014

1. April Bigelow, *Nursing*
Humanizing Technology to Improve Clinical Readiness for Advanced Practice Nursing Students
2. Amanda Lotz, Josh Pasek, and Aswin Punathambekar, *Communication Studies*
Evaluating Information and Analyzing Media I & II
3. Audrey Seasholtz, *Medicine*
Neuroscience Graduate Program Curriculum: Enhancing Professional Development in Scientific Communication and Evaluation

Gilbert Whitaker Fund Recipients, Fall 2014

1. Udo Becker and Rose Cory, *Earth and Environmental Sciences*
Development of Environmental/Aqueous Geochemistry Laboratory Classes
2. Pamela Bogart, *English Language Institute*
Teaching Matters: Understanding the Experience of International GSIs in LSA
3. Paul Conway, *Information*
Algorithms and Quality in Collaborative Writing: Extending MediaWiki Tools for Assessing Upper Level Writing
4. Gyorgyi Csankovszki and Diane Spillane, *Molecular, Cellular, and Developmental Biology*; Laury Wood, *Comprehensive Studies Program*
Toward Flipping the Classroom: Developing an Online Learning Module for Introductory Biology
5. Shahzad Mian, *Ophthalmology and Visual Sciences*
Novel Pedagogical Approach for Ophthalmic Knowledge and Skills Development Through Direct Ophthalmoscopy Simulation
6. Mark Moldwin, *Atmospheric, Oceanic and Space Sciences*
Development, Implementation and Assessment of a new Degree Program in AOSS
7. Christianne Myers, *Theatre and Drama*
Sun & Shadows- A Guatemalan Tale Projected on North Campus
8. Kimberly Redic, Michael Kraft, and Bruce Mueller, *Pharmacy*
Impact of Including a 2D Virtual USP Chapter <797> Cleanroom Experience on Pharmacy Student Knowledge and Perceptions of Learning Related to Preparation of Compounded Sterile Products (CSP)
9. Kendrin Sonnevile, *Environmental Health Sciences*
Introducing Communication Skills to Reduce Disparities in Dietetics Training
10. Dimitrios Zekkos, *Civil and Environmental Engineering*
Enhancing Undergraduate Student Engagement in Geotechnical Engineering Beyond the Classroom Using Online Applications

► Internationalizing the Curriculum Grant

The University of Michigan prepares its students for lives of significant international engagement. In line with this mission, and with support from the offices of the vice provost for international affairs and the senior vice provost for academic affairs, CRLT awards two-year grants for courses and curricular initiatives that expand and enrich international themes. Grant awards up to \$10,000 are made to individuals or groups of faculty for course or curricular development. Funded courses must be taught in two sequential academic years. Grantees collaborate with a CRLT consultant to gather feedback and assess the course.

Internationalizing the Curriculum Grant Recipients, Winter 2015

1. Jose Alfaro, *Natural Resources*
Practice in Technology and Community Sustainable Development
2. Michelle Bellino, *Educational Studies*
International and Comparative Education: Globalization, Conflict, and Development

3. Sharon Haar, *Architecture*
Internationalizing/Institutionalizing the "Propositions" Studio
4. Jesse Hoffnung-Garskof, *History* and Bridgette Carr, *Human Trafficking Clinic*
Internationalizing the Law and Legal History Curriculum on Human Trafficking and Slavery
5. Nancy Love, *Civil and Environmental Engineering*
Water and Sanitation Systems in Developing Countries

► Investigating Student Learning Grant

Now in its eighth year, this program provides grants to faculty who wish to investigate aspects of student learning in their courses, curricula, or educational programs. ISL participants attend a one-day spring symposium at U-M on research about teaching and learning, conduct educational research on student learning, and share their insights with colleagues at a CRLT-sponsored forum. Grant awards of \$3,000 are available to individual faculty members, and awards of \$4,000 are available to faculty member-graduate student/postdoc teams.

Investigating Student Learning Grant Recipients, Winter 2015

1. Hsun-Liang Chan, Rachel Sheridan, and Tae-Ju Oh, *Periodontics and Oral Medicine*
Dental Students Apply Evidence-Based Practice (EBP) to Clinical Scenarios: Developing, Enhancing, and Assessing Skills
2. Robin Fowler, *Program in Technical Communication*
Investigating the Relationships of Student Engineering Team Size and Make-Up with Project Success and Team Satisfaction
3. Adrienne Haggins, *Emergency Medicine*; and Helen Morgan, *Obstetrics and Gynecology*
A Qualitative Study of Underrepresented Minority Students' Pre-Med Education and Experiences
4. Sarah Kelling, *Pharmacy*
Virtual Software to Personalize Student Learning in a Required Pharmacy Course
5. Allen Liu, *Mechanical Engineering*
Enhancing Student Learning in Mechanics Through the Development and Implementation of a Concept Guide
6. Joanna Millunchick, *Materials Science*
The Impact of Computer-Aided Versus Manual Analyses on Critical Thinking in Materials Science and Engineering
7. Laura Olsen, *Molecular, Cellular, and Developmental Biology* and Cynthia Giffen, *Comprehensive Studies Program*
Developing an Introductory Biology Preparation Assessment Tool
8. Anne Sales, *Nursing*
Learning From Cases in a Large, Web-Blended Class, Nursing 527
9. Norma Sarkar, Judith Policicchio, and Nancy Gallagher, *Nursing*
Evaluating the Impact of Global Clinical Immersion Strategies in Undergraduate Community Health Nursing Education

10. Burgunda Sweet, *Pharmacy*
Using Team-Based Interprofessional Education to Enhance Student Knowledge of Healthcare Professional Roles
11. Michael Thouless, *Mechanical Engineering*
Smelling the Roses in ME211

► Faculty Communities for Inclusive Teaching

This initiative builds faculty capacity for supporting an inclusive campus climate through their teaching in classrooms, clinics, studios, or labs. Funds of up to \$1,000 are available for projects that assemble small groups of faculty to discuss and learn together about campus diversity and inclusive teaching practices. Project leads gather twice: once to discuss their plans and once again at the end of the funding period to share key insights and dissemination plans.

Faculty Communities for Inclusive Teaching, Winter 2015

1. Judy Dyer, *English Language Institute*
Meaningful Interaction & Inclusivity in the Classroom
2. Cameron Gibelyou, *University Courses*
Religious Diversity at the University of Michigan
3. Stephanie Goetz, *Romance Languages and Literatures*
Leveraging Diversity in Smaller Classes
4. Petra Koppers, *English Language and Literature*
Campus Climate and Disability
5. Madhumita Lahiri, *English Language and Literature*
"Object Lessons" for Junior Faculty
6. Kelly Maxwell, *InterGroup Relations*
LSA Undergraduate Education Committee on Campus Climate
7. Sara McClelland, *Women's Studies*
Race & Sexuality in the Classroom
8. Tim McKay, *Physics*, and Ken Powell, *Aerospace Engineering*
Why Are Some Fields So Male Dominated?
9. Anne McNeil, *Chemistry*
Understanding the Tilted Playing Field
10. Michael Naylor, *Comprehensive Studies*
Native American Higher Education Panel

► Lecturers' Professional Development Fund

Lecturers with continuing teaching appointments on the Ann Arbor campus are eligible for grants of up to \$2,000 to support professional development activities that involve teaching, research, and/or creative endeavors. Examples of grant funding include participation at national or international professional meetings, pedagogical programs and projects, graduate student or work-study student assistance, computer hardware or software, travel required to access resources at other institutions, subscriptions to professional journals, and editorial assistance.

Lecturers' Professional Development Fund Recipients, Fall 2014

1. Patrick Burke, *Internal Medicine*
57th Annual American Society of Hematology Meeting--December 2015
2. Jeremiah Chamberlin, *English Language and Literature*
2015 AWP Writers Conference Panel Presentation and Bookfair
3. Abigail Fahim, *Ophthalmology and Visual Sciences*
Attendance at the Association of University Professors of Ophthalmology Annual Meeting
4. Karl-Georg Federhofer, *German*
Soccer: New Goals for the German Curriculum
5. Ana Fernandez, *Residential College*
Photopolymer Printmaking Workshop
6. David Frye, *Anthropology*
2015 Latin American Studies Association Conference
7. Lorenzo Garcia-Amaya, *Romance Languages and Literatures*
Study Abroad and Internships Abroad: Second Language Research and Practice
8. Mary Gell, *German*
"Writing the Unthinkable." Participation in a writing workshop with Lynda Barry
9. Dawn Hollison, *Screen Arts and Cultures*
Global Cinematography Institute Workshop
10. Jeffrey Kahan, *Urban and Regional Planning*
Attend 2015 American Planning Association Conference
11. Jaffer Kolb, *Architecture*
Gross Loss/Net Gain
12. Donka Markus, *Classical Studies*
Paper Presentation at a Professional Conference (SCS)
13. Ana Morcillo Pallares, *Architecture*
Bottom-Up Detroit
14. Aki Morikawa, *Internal Medicine*
Enhancing Scholarship and Collaboration Through Attendance at a Scientific Meeting

15. Andrew Noverr, *Romance Languages and Literatures*
Using Popular Culture in the Spanish as a Second Language Classroom
16. Maria Papaleontiou, *Internal Medicine*
Impact of Age and Comorbidity on Thyroid Cancer Decision Making
17. Svitlana Rogovyk, *Slavic*
Participation in IX ICCEES World Congress in August 2015 and Revision of the Russian for Heritage Speakers Course Content
18. Jeff Stanzler, *Educational Studies*
Teaching, Technology, and the Building of Professional Communities of Support
19. Bradley Taylor, *History of Art*
Authenticity Reconsidered: Archival Research, Scholarly Presentation, and Publication
20. Laura Thomas, *Residential College*
Locating Digital Storytelling in the Undergraduate Creative Writing Curriculum: Panel Presentation at the Association of Writers and Writing Program's Annual Conference
21. Martin Walsh, *Residential College*
Corsica Project, Residential College
22. Yu Wang, *Neurology*
68th American Epilepsy Society Annual Meeting
23. Lisa C. Young, *Anthropology*
Ancient Community Space: A Presentation at the Society for American Archaeology Annual Meeting

► Instructional Development Fund

Through its Instructional Development Fund (IDF), CRLT awards small grants of up to \$500 to faculty on the Ann Arbor campus. These grants support innovative activities to improve teaching and learning. The funds may be used for expenses such as supplies and equipment, programming or research assistance, and fees for conferences directly related to teaching. Applications are accepted on a rolling basis throughout the year.

Instructional Development Fund Recipients, 2014-2015

1. Stephen DeBacker and Angela Kubena, *Mathematics*
Expanding Student Learning Opportunities in Calculus by Teaching GSIs a Culturally Responsive Feedback Strategy
2. Sabine Gabaron, *Romance Languages and Literatures*
The Angoulême Festival - Analysis of the Collection for the Competition to Better Understand French Comics
3. Brenda Gunderson, *Statistics*
HyFlex Statistics Computer Lab with R
4. Michael Gurevich, *Performing Arts Technology*
Electronic Chamber Music Concert in Detroit

5. Anne Gwozdek, Janet Kinney, and Dina Korte, *Periodontics and Oral Medicine*
Enhancing Application of Health Behavior Change Throughout the Dental Hygiene Curriculum
6. Peter Hagan, *Internal Medicine*
Innovative Teaching Curriculum in the Cardiac Intensive Care Unit Using Mobile Apps
7. Catherine Hausman, *Public Policy*
Inclusive and Policy-Relevant Statistical Methods
8. Gabrielle Hecht and Anne Berg, *History*
Field Trips for Hist/Environ 223: Trashed! A History of Garbage in the Modern World
9. Sarah Himself Burcon, *Program in Technical Communication*
Audience Work in Technical Communication
10. Dawn Hollison, *Screen Arts and Cultures*
Cinematography Workshop
11. Sherrie Kosoudji, *Social Work*
Undocumented Migration and the U.S./Mexico Border
12. Liz Kolb, *Teacher Education*
App Maker Faire
13. Igor Kriz, *Mathematics*
Rubik's Cubes in Mathematics 412
14. Rhonda McCaffery, *Program in Technical Communication*
Audience Work in Technical Communication
15. Nansook Park, *Psychology*
Experiential Learning of Savoring Using an Art Class
16. David Porter, *English Language and Literature*
Research Towards a Revised Proposal for an Accelerated MA Program in Intercultural Studies
17. Andrew Ryan, *Health Management and Policy*
Healthcare Quality Poster Session
18. Dabak Shubhangi, *Germanic Languages and Literature*
Travelling to Germany for Professional Development Seminar for Business German "Ready for the Working World"
19. Sean Silver, *English Language and Literature*
Exhibition Catalogue of the Museum of Literary Objects

Appendix B: Disciplinary-Based, Customized Services for Schools, Colleges, and Other Units

CRLT responds to units based on their particular teaching and learning needs. Services include support for assessment of student learning, customized seminars and retreats, support for unit-wide graduate student instructor (GSI) training, consultations offered to individual faculty at the request of a specific unit, and consultations with deans and chairs focusing on unit-wide activities. CRLT provided over 4,000 services for all 19 of U-M's schools and colleges, as well as 17 other units, including the president's and provost's offices.

Disciplinary-Based Services for U-M Schools, Colleges, and Departments

Architecture and Urban Planning

- * Assistance with IRB approval, as well as survey and focus group development for Tactile Technologies for Play and Learning (TLTC Quick Wins)
- * Assistance with survey development for Interactive Satellite Solar Lab (TLTC Quick Wins)
- * Consultation on project proposal and assessment for Michigan Engaging Community Through the Classroom (TLTC Transformation); once funded, development of detailed assessment plan and assistance with midterm student feedbacks and plan implementation
- * Development of assessment plan and assistance with IRB approval for Practice Sessions (formerly Master Class; TLTC Transformation); once funded, conducted observations and focus group to support project assessment
- * Facilitation of several midterm student feedback sessions for Cleveland Design Lab (TLTC Quick Wins)
- * Grants for professional development received by Kahan, Kolb, Pallares
- * Grants for teaching innovation received by Fontaine, Haar, Norton

Art & Design

- * Assistance with assessment plan for Stamps social engagement requirement; presentation of project at provost's seminar on engaged learning (winter 2015)
- * Consultation on curriculum design for new master's program in Design
- * Consultation with associate dean on curriculum planning
- * Grants for teaching innovation received by Tharp

Business

- * Facilitation of focus groups to inform DEI-funded "Design Your Own Entrepreneurship Adventure"
- * Facilitation of curriculum planning meeting for BBA Junior Year Integrative Semester
- * Facilitation of a panel for faculty about flipped classroom
- * Facilitation of a workshop for faculty about flipped classroom
- * Organization, implementation, and evaluation of a teaching academy for newly hired faculty, in consultation with associate dean, including classroom observations, workshop on case-based teaching, and reunion meeting in the winter term

Dentistry

- * Consultations on assessment and provision of follow-up resources, such as assistance with selection of faculty development tools, for TLTC Transformation Project, Interprofessional Education (IPE); planning and facilitation of IPE kickoff and summer retreats
- * Consultations with teaching team for Team-Based Clinical Decision Making course, including collection of student feedback and discussion of future faculty development needs
- * Facilitation of workshop “Excellence Through Diversity” for periodontics and oral medicine
- * Grants for professional development received by Gwozdek, Kinney, Korte
- * Grants for teaching innovation received by Chan, Fitzgerald, Oh, Sheridan, Sweier
- * Interactive theatre performance about mentoring graduate students for faculty and graduate students
- * Service on dissertation committee
- * Teaching academy for newly hired faculty in health science disciplines

Education

- * Collaboration on GradeCraft expansion, including presentation to the TLTC committee, documentation for new instructors, and workshops on gameful learning for future users
- * Consultation on faculty diversity workshop
- * Grants for professional development received by Kolb, Stanzler
- * Grants for teaching innovation received by Bellino, Saunders
- * Service on dissertation committee

Engineering

- * Co-facilitation of Canvas demonstration for faculty from technical communication program
- * Consultation on project proposal and assessment for Michigan Engaging Community Through the Classroom (TLTC Transformation); once funded, development of detailed assessment plan and assistance with midterm student feedbacks and plan implementation
- * Development and facilitation of one-and-a-half day teaching orientation program for new engineering faculty
- * Development of assessment plan for Medical Device Sandbox (formerly Clinical Immersion and Experiential Learning in Medical Product Innovation) TLTC Quick Wins/Discovery project; assistance with IRB approval, conduction of focus group, and assistance with survey development and analysis
- * Grants for professional development received by Burcon, McCaffery
- * Grants for teaching innovation received by El-Tawil, Fowler, Hohner, Liu, Love, McCormick, Millunchick, Moldwin, Okwudire, Powell, Thouless, Zekkos
- * Interactive theatre preview for administrators on instructors’ responsibilities to students facing mental health challenges
- * Interactive theatre performance for casebook committee on how gender and faculty rank influence dynamics and the decision-making process of tenure committees
- * Interactive theatre previews for faculty and graduate students (separately) on graduate climate in lab environments with a particular focus on gender
- * Ongoing consultation with associate deans about CRLT-Engin initiatives for faculty and GSIs
- * Organization of an annual poster fair for faculty and GSIs showcasing scholarship and research in engineering education

- * Organization of two iterations of a teaching circle on teaching large courses
- * Workshops for faculty: creating classroom environment to enable all students to succeed, lessons from the flipped classroom for engaged student learning, turning student groups into high performance teams, Jean-luc Doumont on teaching is not learning, effective classroom teaching

GSI-related services

- * Collaboration in designing May 2015 NextProf program for grad students and postdocs
- * Discussion of graduate student teaching opportunities with respect to EM-PACE project
- * Facilitation of “Backward Course Design: Planning for What Your Students Will Learn” for civil engineering graduate students
- * Hiring, training, and supervision of engineering teaching consultants (ETCs)
- * Organization and facilitation of a customized GSI training program prior to the start of classes for the fall 2014 term, including interactive theatre performance about classroom climate and practice teaching sessions
- * Organization and facilitation of a customized training program for instructional aides (IAs) in the fall 2014 and winter 2015 terms
- * Organization of Richard and Eleanor Towner Prize for Outstanding Graduate Student Instructors, including the nomination, selection, and publicity processes
- * Oversight of Rackham Certificate in Engineering Education Research program
- * Team teaching of ENG 580: Teaching Engineering
- * Workshop for NextProf on writing teaching philosophy statements
- * Workshops for ETCs on observing classes, midterm student feedback, practice teaching, strategies for working with GSIs, consulting with GSIs, and research in engineering education
- * Workshops for graduate students and postdoctoral scholars: implementing active learning plans, low stakes ways to assess student learning, strategies for handling sticky situations with students, maximizing student learning during office hours, research-based principles for making learning work, improving communication with students

Information

- * Collaboration on GradeCraft expansion, including presentation to the TLTC committee, documentation for new instructors, and workshops on gameful learning for future users
- * Consultation on assessment plan for study abroad experiences
- * Consultation on training plans for GSIs and lecturers, as follow up to a Faculty Development Fund grant
- * Grant for teaching innovation received by Conway
- * Workshop for GSIs, “Teaching Students to Interact Effectively Within Intercultural Teams”

Kinesiology

- * Collaboration on research supported by the Echo360 Active Learning Grants Program, “Effects of Image-Based and Text-Based Activities on Student Learning Outcomes”
- * Collaboration with DEI in planning and facilitating three workshops on course design and using digital tools to meet a course’s learning objectives for Hybrid Modular Courses (TLTC Discovery grant)
- * Consultations on assessment and provision of follow-up resources, such as assistance with selection of faculty development tools, for TLTC Transformation Project, Interprofessional Education (IPE)
- * Evaluation of curricular integration in movement science

- * Facilitation of “Teaching Inclusively in the Kinesiology Classroom” workshop for faculty
- * Planning and facilitation of IPE kickoff and summer retreats
- * Presentation for faculty on Canvas and Unizin

Law

- * Consultation about diversity workshop for faculty
- * Consultation about educational climate committee
- * Evaluation of Lab Experiential Learning initiative
- * Evaluation of Michigan Access Program pre-orientation for incoming 1Ls
- * Evaluation of persuasive writing workshops required for all 1Ls
- * Evaluation of Unemployment Insurance Clinic experiential learning initiative
- * Grant for teaching innovation received by Carr

Literature, Science, and the Arts

- *Anthropology*
 - * Grants for professional development received by Frye, Young
 - * Grant for teaching innovation received by Young
- *Asian Languages and Cultures*
 - * Evaluation of Japan Foundation grant for creation of Japanese studies MA fellows programs and undergraduate immersive learning experiences
 - * Facilitation of workshop for GSIs and faculty on the Graduate Program Committee about teaching sensitive topics
- *Astronomy*
 - * Grant for teaching innovation received by Ruszkowski
- *Chemistry*
 - * Grant for teaching innovation received by McNeil
 - * Organization of luncheon for REBUILD postdoctoral scholars
 - * Planning of REBUILD visioning meeting
- *Classical Studies*
 - * Grant for professional development received by Markus
- *Communication Studies*
 - * Grant for teaching innovation received by Lotz, Pasek, and Punathambekar
 - * Interactive theatre preview for faculty about the ways identity affects student engagement and experience
- *Comparative Literature*
 - * Workshop for GSIs on preparing to teach
- *Comprehensive Studies Program*
 - * Grants for teaching innovation received by Giffen, Halpern, Naylor, Wood
- *Dean's Office*
 - * Assistance with focus group design for optiMize Social Innovation
 - * Consultation on evaluation of CSP 100
 - * Consultation on theatre performances for 2015-2016

- * Consultation with associate dean about diversity teaching initiatives
- * Consultation with associate dean for undergraduate education on workshop for junior faculty regarding third-year review process
- * Coordination and facilitation of the LSA Large Course Initiative
- * Design and presentation of a faculty institute on dialogue and dialogue skills in collaboration with IGR for faculty in LSA. This year's departments included Afroamerican and African studies, American culture, communication studies, English language and literature, history, Latin American and Caribbean studies, organizational studies, philosophy, romance languages and literatures, sociology, Sweetland Center for Writing, and women's studies.
- * Development and facilitation, in collaboration with ADVANCE and IGR, of "Preventing and Addressing Incivility in the Classroom" for the LSA Seminar Series
- * Development and facilitation of a teaching academy for all new assistant professors in the college, including a two-day orientation, facilitation of midterm student feedback sessions, facilitation of peer observation of senior colleagues, an interactive theatre performance about mentoring graduate students and a final program on teaching issues arising in the first year of teaching
- * Evaluation of smaller section pilots in German and Spanish, including data collection and report (Faculty Expansion Project)
- * Facilitation of sessions on classroom practice and discussion, as well as on testing and assessment issues, for LSA Diversity Institute
- * Interactive theatre performance about ways identity characteristics affects department politics for faculty across the university
- * Interactive theatre performances on graduate climate in lab environments with a particular focus on gender for female STEM faculty, as well as for faculty and graduate students across the university
- * Interactive theatre performances on how gender and faculty rank influence dynamics and the decision-making process of tenure committees
- * Interactive theatre preview for administrators on instructors' responsibilities to students facing mental health challenges
- * Interactive theatre preview of revised tenure and promotion session for new LSA dean, ADVANCE
- * Presentation to LSA advisors on CRLT pathways projects
- * Presentation to LSA undergraduate education group on institutional data available to departments for assessment
- * Support for REBUILD included
 - planning and implementation of a Provost's Seminar on Teaching, "REBUILDing STEM Education at Michigan" (fall 2014)
 - assistance planning and facilitating December retreat
 - attending two meetings per month
 - organization of a monthly postdoc meeting
 - planning visioning meeting

GSI-related services

- * Collaboration with English Language Institute to develop and facilitate a three-week intensive course in August 2014 and a winter 2015 course for graduate students educated abroad in languages other than English who plan to have GSI appointments in LSA, including interactive theatre performances about gender climate issues in the classroom

- * Interactive theatre performance on instructors' responsibilities to students facing mental health challenges for GSI coordinators across the university
- * Organization and facilitation of GSI orientation training programs prior to fall 2014 and winter 2015 terms, including theatre performances on inclusive teaching practices
- * Session for faculty GSI coordinators and GSMs to share strategies on GSI training
- * Training for all incoming GSIs about sexual harassment, using interactive theatre performances
- * Workshop training practice teaching facilitators for GSI teaching orientations
- * Workshops for GSMs and GSI coordinators about observing classes, midterm student feedback, practice teaching, strategies for working with GSIs, and consulting with GSIs
- *Earth and Environmental Sciences*
 - * Grant for teaching innovation received by Becker and Cory
- *English Language and Literature*
 - * Grants for professional development received by Chamberlin, Porter, Silver
 - * Grants for teaching innovation received by Koppers, Lahiri
 - * Planning and facilitation of workshop for GSIs on identity/authority and inclusive teaching
 - * Interactive theatre preview about the ways identity affects student engagement and experience for GSIs, faculty, and lecturers in the Writing Program
 - * Survey and reporting on classroom climate for English majors
- *English Language Institute*
 - * Evaluation of classroom climate for international GSIs
 - * Grants for teaching innovation received by Bogart, Des Jardins, Dyer
 - * Interactive theatre performance for international graduate students about classroom climate
- *Environment, Program in the (PiTE)*
 - * Grant for teaching innovation received by Bouma
- *Germanic Languages and Literatures*
 - * Evaluation of smaller section initiative
 - * Grants for professional development received by Federhofer, Gell, Shubhangi
- *Global Scholars Program*
 - * Grant for teaching innovation received by routenberg
- *History*
 - * Design of assessment plan for History/Bentley TLTC Transformation Grant: Engaging the Archives
 - * Grant for teaching innovation received by Hecht and Berg
 - * Grant for teaching innovation received by Hoffnung-Garskof
 - * Participation in midterm check-in meeting with History 195 instructors
 - * Workshop for History 195 GSIs on teaching introductory courses
- *History of Art*
 - * Grant for professional development received by Taylor
- *Intergroup Relations (IGR)*
 - * Grants for teaching innovation received by Maxwell

- *Mathematics*
 - * Grants for professional development received by De Backer and Kubena, Kriz
 - * Grant for teaching innovation received by Halpern
 - * Planning for assessment of smaller section initiative
 - * Interactive theatre performance for new GSIs & postdocs about classroom climate
 - * Interactive theatre performance for GSIS about productively managing teaching challenges
- *Molecular, Cellular, and Developmental Biology (MCDB)*
 - * Discussion of teaching issues and CRLT resources with junior faculty group
 - * Grants for teaching innovation received by Csankovzski and Spillane, Olsen
- *Physics*
 - * Grant for teaching innovation received by McKay
- *Political Science*
 - * Collaboration on GradeCraft expansion, including presentation to the TLTC committee, documentation for new instructors, and workshops on gameful learning for future users
 - * Planning and facilitation of workshop for new GSIs on inclusive teaching and hot moments
- *Psychology*
 - * Assistance with departmental GSI training, including role-playing about syllabus policies
 - * Collaboration with Large Course Initiative faculty participant to develop video resource on effective use of Google forms
 - * Grant for professional development received by Park
 - * Planning and facilitation of workshop for GSIs on inclusive teaching
 - * Presentation about CRLT services at departmental graduate student orientation
 - * Workshop for GSIs on creating multiple choice questions for Project Outreach service learning course
 - * Workshop for GSIs on writing teaching philosophy statements
- *Residential College*
 - * Co-facilitation of session on writing and assessing learning objectives
 - * Grants for professional development received by Fernandez, Thomas, Walsh
- *Romance Languages and Literatures*
 - * Assessment of Spanish 232 students' satisfaction with newly adopted workbook and classroom activities
 - * Evaluation of smaller section initiative
 - * Grants for professional development received by Gabaron, Garcia-Amaya, Noverr
 - * Grant for teaching innovation received by Goetz
 - * Planning and facilitation of workshop for lecturers and coordinators about classroom climate and inclusive teaching, along with consultation with program director about follow up
- *Screen Arts and Cultures*
 - * Grants for professional development received by Hollison
 - * Grant for teaching innovation received by Moore and Gunckel
- *Slavic Languages and Literatures*
 - * Grant for professional development received by Rogovyk

- *Sociology*
 - * Consultation about GSI training
 - * Interactive theatre performance for faculty about mentoring graduate students
 - * Interactive theatre preview for faculty about the ways identity affects student engagement and experience
- *Statistics*
 - * Grant for professional development received by Gunderson
- *Sweetland Center for Writing*
 - * Consultation on peer tutor survey
 - * Grant for teaching innovation received by Silver
- *University Courses*
 - * Grant for teaching innovation received by Gibelyou
- *Women's Studies*
 - * Consultation with GSIs regarding their workshop on feminist pedagogies
 - * Consultation on design of and participation in panel on "Feminist Interactivities"
 - * Grant for teaching innovation received by McClelland

Medicine

- * Assistance with design of educational development component of anesthesiology faculty retreat
- * Assistance with and evaluation of pilot project for peer observation of clinical teaching
- * Consultation on creating role plays for TASS seminar, "Race, Ethnicity, and Difference in American Society and Medicine"
- * Consultations on assessment and provision of follow-up resources, such as assistance with selection of faculty development tools, for TLTC Transformation Project, Interprofessional Education (IPE); planning and facilitation of IPE kickoff and summer retreats
- * Consultations with teaching team for Team-Based Clinical Decision Making course, including collection of student feedback and discussion of future faculty development needs
- * Development of assessment plan for Medical Device Sandbox (formerly Clinical Immersion and Experiential Learning in Medical Product Innovation) TLTC Quick Wins/Discovery project; assistance with IRB approval, conduction of focus group, and assistance with survey development and analysis
- * Facilitation of focus groups with pediatrics residents about current and future curricula for Pediatric Community Health rotation
- * Grants for professional development received by Burke, Fahim, Hagan, Morikawa, Papaleontiou, Wang,
- * Grants for teaching innovation received by Haggins, Morgan, Hornyak, House, London, Mian, Seasholtz, Stojan
- * Interactive theatre performances on breaking bad news for third-year medical students
- * Interactive theatre performance about medical culture for rising third year medical students
- * Meeting to discuss research design for two projects to address medical student and resident learning of treatment planning and application of guidelines
- * Planning and facilitation of workshop on clinical teaching scripts for Office of Faculty Development, as well as oncology and hematology
- * Presentation at Anesthesiology Education Seminar Dinner

- * Presentation on One-Minute Preceptor for anesthesiology
- * Presentations about CRLT certificate and mentorship program for graduate students in neuroscience and in Programs in Biomedical Sciences
- * Provision of resources on CRLT programs and services at faculty orientation
- * Teaching academy for newly hired faculty in health science disciplines

Music, Theatre & Dance

- * Co-facilitation of faculty retreat focused on climate for students, along with follow up faculty meeting discussion
- * Consultation with musical theatre faculty about attendance/participation
- * Grant for professional development received by Gurevich
- * Grant for teaching innovation received by Myers
- * Presentation for DMA students on developing their teaching philosophies and CRLT services
- * Presentation for MUSED 595 students on Google tools for teaching

Natural Resources and Environment

- * Assistance with NSF proposal
- * Grant for teaching innovation received by Alfaro

Nursing

- * Consultation about Clinical Learning Center evaluation
- * Consultations on assessment and provision of follow-up resources, such as assistance with selection of faculty development tools, for TLTC Transformation Project, Interprofessional Education (IPE); planning and facilitation of IPE kickoff and summer retreats
- * Consultations with teaching team for Team-Based Clinical Decision Making course, including collection of student feedback and discussion of future faculty development needs
- * Evaluation of PhD program
- * Grants for teaching innovation received by Aslanian-Engoren, Bigelow, Gallagher, Pardee, Policicchio, Sales, Sarkar
- * Presentation on CRLT resources for faculty
- * Teaching academy for newly hired faculty in health science disciplines

Pharmacy

- * Collaboration on the design and facilitation of annual retreat for therapeutics faculty
- * Consultations on assessment and provision of follow-up resources, such as assistance with selection of faculty development tools, for TLTC Transformation Project, Interprofessional Education (IPE); planning and facilitation of IPE kickoff and summer retreats
- * Consultations with teaching team for Team-Based Clinical Decision Making course, including collection of student feedback and discussion of future faculty development needs
- * Grants for teaching innovation received by Kelling, Kraft, Mueller, Redic, Sweet
- * Teaching academy for newly hired faculty in health science disciplines
- * Workshop on facilitating discussions for residents

Public Health

- * Consultation on project proposal and assessment for Michigan Engaging Community Through the Classroom (TLTC Transformation); once funded, development of detailed assessment plan and assistance with midterm student feedbacks and plan implementation
- * Consultations on assessment and provision of follow-up resources, such as assistance with selection of faculty development tools, for TLTC Transformation Project, Interprofessional Education (IPE)
- * Consultations with teaching team for Team-Based Clinical Decision Making course, including collection of student feedback and discussion of future faculty development needs
- * Grant for professional development received by Ryan
- * Grants for teaching innovation received by Koman, Sonnevill
- * Teaching academy for newly hired faculty in health science disciplines
- * Participation in the Office of Public Health E-Learning Think Tank
- * Planning and facilitation of IPE kickoff and summer retreats
- * Planning and facilitation of workshop for GSIs on inclusive teaching
- * Planning and facilitation of workshop on active learning for PUBHLTH 200 GSIs

Public Policy

- * Consultation on project proposal and assessment for Michigan Engaging Community Through the Classroom (TLTC Transformation); once funded, development of detailed assessment plan and assistance with midterm student feedbacks and plan implementation
- * Debrief of retreat/planning for future activities on climate
- * Grant for professional development received by Hausman
- * Grant for teaching innovation received by Gerber
- * Provision of models of midcourse feedback, including some with questions on classroom climate, for distribution as resource for faculty

Rackham Graduate School

- * Collaborative development of online postdoc short course
- * Consultation on evaluation plan for Mellon Public Humanities Fellowship
- * Coordination and evaluation of a certificate for GSIs on the use of digital media
- * Coordination and evaluation of the U-M Graduate Teacher Certificate Program, including reviewing portfolios and awarding certificates; leadership of advisory committee
- * Facilitation of “What’s It Like?” a three-session series and website highlighting faculty worklife in different institutional contexts
- * Interactive theatre performance about mentoring graduate students for graduate students across the university
- * Interactive theatre performance on graduate climate in lab environments with a particular focus on gender for faculty and graduate students across the university
- * Organization, implementation, and evaluation of month-long Rackham-CRLT Seminar on College Teaching: Preparing Future Faculty for advanced doctoral students and postdocs, including interactive theatre performance on productively addressing classroom conflict while attending to student diversity
- * Organization, implementation, and evaluation of one-day Preparing Future Faculty Conference

- * Organization, implementation, and evaluation of the Postdoctoral Short-Course on College Teaching in Science and Engineering, including interactive theatre performance about classroom climate
- * Organization, implementation, and evaluation of the six-session program on Multicultural Facilitation for the Classroom for GSIs, with The Program on Intergroup Relations
- * Participation in Outstanding GSI Awards selection process and presentation of awards at ceremony
- * Participation in program on alternative careers for graduate students
- * Participation in Rackham New Graduate Student Orientation Resource Fair, fall and winter terms
- * Participation in selection of U-M postdoctoral fellows at Oberlin and Kalamazoo Colleges and evaluation of the program
- * Participation in speed mentoring event about non-academic careers
- * Workshop for postdocs on writing teaching philosophy statements

Social Work

- * Consultation on assessment plan for study abroad experiences
- * Consultations on assessment and provision of follow-up resources, such as assistance with selection of faculty development tools, for TLTC Transformation Project, Interprofessional Education (IPE); planning and facilitation of IPE kickoff and summer retreats
- * Consultations with teaching team for Team-Based Clinical Decision Making course, including collection of student feedback and discussion of future faculty development needs
- * Grant for professional development received by Kosoudji
- * Grants for teaching innovation received by Lapidos, Mattison, Zebrack

Customized Services for Other Units at U-M

ADVANCE

- * Interactive theatre performance on department politics and leadership strategies for faculty across the university (LIFT - Leadership and Integration in Faculty Transitions)
- * Interactive theatre role play session for faculty about engaging in difficult conversations (LIFT)
- * Participation in Strategies Toward Excellent Practices (STEP) programming for 2014-2015, including session planning and co-facilitation of workshops for departmental faculty teams

Association for Women in Science Grad Students & Postdocs

- * Participation in panel about alt-ac careers

Bentley Library

- * Design of assessment plan for History/Bentley TLTC Transformation Grant: Engaging the Archives

Career Center

- * Collaboration to plan, implement, and evaluate a one-day conference on preparing future faculty

Center for Interprofessional Education

- * Assistance with selection of faculty development tools for TLTC Transformation grant
- * Consultations with teaching team for Team-Based Clinical Decision Making course, including collection of student feedback and discussion of future faculty development needs
- * Participation in Executive Committee meetings
- * Planning and facilitation of IPE kickoff and summer retreats

Digital Education & Innovation

- * Collaboration on the Digital Innovation Greenhouse, including participation in hiring of developers and participation in “Design Jam: Course Selection and Registration in the 21st Century”
- * Collaboration on GradeCraft expansion, including presentation to the TLTC committee, documentation for new instructors, and workshops on gameful learning for future users
- * Collaboration with DEI in planning and facilitating three workshops on course design and using digital tools to meet a course’s learning objectives for Hybrid Modular Courses (kinesiology TLTC Discovery grant)
- * Collaborative development of online postdoc short course
- * Collaborative development and facilitation of E2Coach learning community
- * Facilitation of focus group with engineering advisors about Student Explorer
- * Planning and facilitation of workshop on digital badging for co-curricular learning
- * Planning for and participation in discussion about learning analytics research and faculty development with Coursera visitors
- * Presentation to TLTC about Gameful Assessment in Michigan Education (GAME) Transformation grant

Erb Institute

- * Feedback on alumni survey

Information Technology Services

- * Design and implementation of Canvas pilot project evaluations, including hosting a faculty learning community, reports, and presentations (see p. xx in Assessment).

Institute for the Humanities

- * Collaboration on implementation of a certificate for graduate student instructors on the use of digital media, including focus groups with humanities graduate students

Instructional Support Services

- * Collaboration in planning “Engaging the World From Your Classroom” event
- * Consultation about recordings for ELI 994

Language Resource Center

- * Collaboration in planning “Engaging the World From Your Classroom” event

Libraries

- * Consultation on pilot internship program for mentoring undergraduate research
- * Planning and facilitation of a workshop on teaching inclusively with technology

Office of the President

- * Organization and facilitation of three-week CRLT Fellows program for directors of teaching centers at four Chinese universities: Central China Normal, Nanjing, Renmin and Shanghai Jiao Tong
- * Summary of 2006-2012 Michigan-China leadership forums and faculty development programs shared prior to President Schlissel's first U-M trip to China

Office of the Provost and Executive Vice President for Academic Affairs

- * Collaboration with other instructional technology units to organize and facilitate the Enriching Scholarship Conference, a university-wide, one-week program of workshops, demonstrations, and presentations
- * Consultations with the student learning advisory committee (Provost's Third-Century Initiative)
- * Design and implementation of Faculty Communities for Inclusive Teaching Initiative
- * Interactive theatre performance for the U-M community and the public about students with disabilities
- * Interactive theatre performance on department politics and leadership strategies for faculty across the university
- * Interactive theatre performance on resistance to organizational change for ADVANCE and faculty across the university
- * Organization and facilitation of New Faculty Orientation, including interactive theatre performance on inclusive teaching practices
- * Organization, facilitation, and evaluation of Provost's Campus Leadership Program (both orientation and monthly roundtables) for chairs and associate deans, including effective practices for faculty recruitment, strategies for dealing with difficult conversations, time management and priority setting, and interactive theatre performances on running good meetings and working successfully with staff
- * Organization of campus-wide dinner for international faculty
- * Organization of Student Learning and Analytics at Michigan (SLAM) Seminar Series and Learning Analytics Fellows Program for Provost's Learning Analytics Task Force
- * Participation in Vice Provost and Associate Dean Group
- * Participation on Task Force on Faculty Professional Development in Inclusive Teaching, chaired by Vice Provost for Equity, Inclusion and Academic Affairs
- * Planning and implementation of a Provost's Seminar on Teaching, "Unscripted: Engaged Learning Experiences for U-M Students" (winter 2015)
- * Presentation and report on Global Teaching with Videoconferencing
- * Support for teaching award and grant competitions included
 - Consultation and review of faculty Internationalizing the Curriculum grant program applications
 - Consultations on updating award materials given to Thurnau Professors
 - Coordination of LPDF grants programs for LEO lecturers
 - Coordination of campus-wide Provost's Teaching Innovation Prize in collaboration with vice provost and the dean of libraries

- Organization of competition to select Thurnau Professorships
- Organization of competition to select U-M faculty for Michigan Distinguished Professor of the Year Award
- Organization of competition to select U-M faculty for U.S. Professors of the Year Award
- Organization of dinner honoring 2015 Thurnau Professors
- Organization of Provost's Teaching Innovation Prize and Investigating Student Learning poster session (for Enriching Scholarship)
- * Support for the Third Century Initiative and TLTC included
 - Consultations with 32 teams about TLTC proposals
 - Consultations on assessment for TLTC Discovery and Transformation Grants
 - Hiring and supervision of two postdocs
 - Organization of "Thinking Big" symposium convening TLTC grant winners and reception, including collaborative development of video materials
 - Organization of May 2015 creativity engaged learning assessment lunch

Sexual Assault Prevention and Awareness Center (SAPAC)

- * Planning blog post for sexual assault awareness month

Teaching and Technology Collaborative

- * Collaboration with other instructional technology units to organize and facilitate the Enriching Scholarship Conference, a university-wide, one-week program of workshops, demonstrations, and presentations,
- * Organization of Provost's Teaching Innovation Prize and Investigating Student Learning poster session (for Enriching Scholarship)
- * Presentation of Canvas evaluation progress report at TeachTech eMerge
- * Seminars and workshops on technology and teaching

University Musical Society

- * Facilitation of workshop for UMS Mellon Faculty Institute about assessment strategies

Appendix C: Collaborations and Committee Work

Collaboration with Other Units

Collaboration with other U-M offices is a key component of CRLT services. During 2014-2015, CRLT worked with all schools and colleges on teaching improvement projects. Additionally, CRLT collaborated with:

- * Arts at Michigan
- * The Career Center
- * Center for Engaged Academic Learning
- * Center for Interprofessional Education
- * Center for Statistical Consultation and Research (CSCAR)
- * English Language Institute (ELI)
- * Ginsberg Center for Community Service and Learning
- * Information Technology Services
- * InterGroup Relations (IGR)
- * Language Resource Center
- * LSA Instructional Support Services (ISS)
- * LSA Student Academic Affairs
- * Michigan Education through Learning Objects (MELO) Community
- * News Service
- * Office of Digital Education and Innovation
- * Office of the Vice President for Student Life
- * Sweetland Center for Writing
- * Teaching and Technology Collaborative
- * University Library

Committee Work

As part of their collaborative efforts, CRLT staff served on a large number of committees within U-M and nationally:

- * Academic Reporting Toolkit (ART) 2.0 Steering Committee
- * Academic Services Board (ASB)
- * Academy of Medical Educators Advisory Committee
- * ART 2.0 User Experience Subcommittee
- * Association of U-M Chinese Professors
- * Center for Interprofessional Education Executive Committee (ad hoc)
- * College of Engineering Information Technology Faculty Council
- * College of Engineering Towner Prize for Outstanding GSIs
- * College of Engineering Undergraduate Education Team
- * CRLT Executive Director Search Committee
- * Digital Innovation Advisory Group (DIAG)

- * DIAG Developing a Tools and Technology Innovation Pipeline Subcommittee (DTTIP)
- * DIAG Digital Ecosystem Subcommittee
- * Digital Innovation Greenhouse (DIG) Project Leadership Team
- * DIG software developer search committee
- * Dissertation committee (School of Education)
- * Dissertation committee (School of Nursing)
- * Enriching Scholarship Keynote Committee, Chair
- * Faculty Leading Change Planning Committee (ADVANCE)
- * Learning Analytics Architecture Group
- * NextProf Planning Committee
- * Provost's Teaching Innovation Prize Selection Advisory Committee
- * Rackham Outstanding Graduate Student Instructor Awards Committee
- * REBUILD
- * School of Education Research Advisory Council
- * Task Force on Faculty Professional Development in Inclusive Teaching
- * Teaching and Technology Collaborative Committee
- * Thurnau Selection Advisory Committee
- * Vice Provost and Associate Dean Group (VPADG)

External Committee Participation

- * Committee on Institutional Cooperation (CIC) Assessment Group
- * Committee on Institutional Cooperation (CIC) Teaching Center Directors Group
- * Consultation with NSF ADVANCE program officers about proposed changes in evaluation structure
- * Ivy Plus Consortium on Teaching
- * POD Board of Directors
- * POD Electronic Communications and Resource Committee
- * POD Executive Committee
- * POD Finance Committee, Chair
- * POD Graduate and Professional Development Subcommittee on Assessment and Evidence-Based Practice
- * POD Menges Award Subcommittee, Chair
- * Unizin Teaching and Learning Advisory Group

Appendix D: External Colleges, Universities, and Organizations Served

Because of its national reputation, representatives of many other institutions contact CRLT for advice and information. In 2014-2015, CRLT provided 1,193 services to external clients who represent 101 colleges and universities, 17 associations, foundations, and other organizations in the United States and abroad (see below). Most frequently, CRLT staff provided information on topics such as how to develop a new teaching center and evaluate its programs, how to work with faculty at a research university, how to embed multicultural teaching and learning into the work of a teaching center, and requests to use CRLT publications and web resources. Additionally, 741 individuals from outside U-M attended performances of the CRLT Theatre Program. Following are lists of the institutions and organizations that received services from CRLT.

* indicates that individuals from that institution or organization visited CRLT in Ann Arbor

Colleges and Universities within the U.S.

Appalachian State University	Massachusetts Institute of Technology
Ashford University	Miami Dade College
Baker College	Michigan State University*
Berkeley College of Music	Michigan Technological University
Brown University	Montana State University
Bucknell University	North Carolina State University
California Institute of Technology*	Northwestern University
California Polytechnic State University	Notre Dame University
Carnegie Mellon University	Oakland University
City University of New York	Oberlin College & Conservatory
Clemson University	Occidental College
Colorado State University	The Ohio State University
Columbia University	Oklahoma State University
Cornell University	Olin College of Engineering
Dension University	Oregon State University
Duke University	Penn State
Elon University	Pomona College*
Georgia Institute of Technology	Princeton University
Hunter College	Purdue University
Indiana University	Purdue University North Central
Indiana University–Purdue University Indianapolis	Rhode Island School of Design
Iowa State University	Rochester Institute of Technology
Jackson College	Rutgers University
Kalamazoo College	Scripps College*
Kansas State University	Southern Methodist University
Kettering University	Stanford University*
Madonna University	Stony Brook University

Colleges and Universities within the U.S. (cont.)

Texas A&M University	University of Oklahoma Health Sciences Center
Texas Tech University	University of Texas - Pan America
The University of Arizona	University of Texas at Austin*
The University of Chicago	The University of Utah
University of Illinois Urbana-Champaign	University of Washington
University of Iowa	University of Wisconsin-Eau Claire
University of Kentucky	University of Wisconsin-Madison
University of Maryland	University of Wisconsin-Stout
University of Massachusetts Amherst	Vassar University
University of Minnesota	Virginia Polytechnic Institute and State University
University of Nebraska	Western Kentucky University

Colleges and Universities outside the U.S.

Beijing Normal University, China*	Nanjing University, China*
Bielefeld University of Applied Sciences, Germany	Open University of China
Central China Normal University*	PSG Institute of Management, India
Chinese Academy of Sciences	Renmin University of China*
Durban University of Technology, South Africa	Shanghai Jiao Tong University, China*
Electronic Technology Information Research Institute, Beijing, China	Shanxi University of China
Fudan University, China	Sun Yat-sen University, China
Hua Zhong Science and Technology University, China	Trinity College, Ireland
Ministry of Education of the People's Republic of China	Universidad de los Andes, Chile*
Namal College, Pakistan*	Universiti Teknologi Malaysia
Nanjing Agricultural University, China	University of British Columbia, Canada
	University of Dammam, Saudi Arabia
	University of Western Ontario, Canada
	Uppsala University, Sweden

Other Organizations and Associations

Association of College and University Educators	National Academy of Advanced Teacher Education
Association of Public and Land-Grant Universities	National Science Foundation
Chronicle of Higher Education	NovoEd, Inc.
Coursera	Piazza
Education Advisory Board	POD Network
Embassy of the Republic of Botswana	St. Joseph Mercy Hospital
Ethiopian Ministry of Health	U.S. Food and Drug Administration
Modjeski and Masters, Inc.	Unizin
	VA Health System

Appendix E: Publications and Presentations

In the 2014-2015 academic year, CRLT again distributed two publications for GSI development: *A Guidebook for University of Michigan Graduate Student Instructors: Strategies and Resources for New and Experienced GSIs* and *Departmental GSI Development: A Handbook for Faculty and GSIs Who Work with GSIs*. The guidebook, handbook, and a series of Occasional Papers are available on CRLT's website. <http://crlt.umich.edu/resources/publications>

In addition, CRLT distributed regular blog posts on topics of interest to campus. For example, "Building pathways to your courses" offered faculty concrete suggestions for recruiting students based on research conducted by CRLT into how U-M undergraduates choose their courses and majors. (See p. 21 for more blog details.)

Publications by CRLT Staff

- Blazek, M. C., Dantz, B., Wright, M. C., & Fiedorowicz, J. G. (forthcoming). Spaced learning using emails to integrate psychiatry into general medical curriculum: Keep Psychiatry in Mind. *Medical Teacher*.
- Gonzalez-Cabezas, C., Anderson, O. S., Wright, M. C., & Fontana, M. (forthcoming). Exam questions developed by students lead to higher cognitive level of learning. *Journal of Dental Education*.
- Pinder-Grover, T. (forthcoming). Discovering the possibilities: Initiatives to explore the higher education landscape. In M. Hatcher & J. Gilmore (Eds.), *Studies in Graduate and Professional Student Development*.
- Remington, T., Hershock, C., Klein, K., Niemer, R., & Bleske, B. (2015). Lessons from the trenches: Implementing team-based learning across several courses. *Currents in Pharmacy Teaching and Learning*, 7(1), 121-130.
- Shekhar, P., DeMonbrun, M., Borrego, M., Finelli, C. J., Prince, M. J., Henderson, C., & Waters, C. K. (2015). Development of an observation protocol to study undergraduate engineering student resistance to active learning. *International Journal of Engineering Education*, 31(2), 597-609.
- Wright, M. C. (2014). Evaluating the effectiveness of teaching centers. *Peking University Education Review*, (2), 13-26.
- Wright, M. C., & Howard, J. (2015). Assessment for improvement: Two models for assessing a large quantitative reasoning requirement. *Numeracy*, 8(1). Available:<http://scholarcommons.usf.edu/numeracy/vol8/iss1/>
- Wright, M.C., McKay, T., Hershock, C., Miller, K., & Tritz, J. (2014). Better than expected: Using learning analytics to promote student success in gateway physics. *Change* 46(1), 28-34. Available:http://www.changemag.org/Archives/Back%20Issues/2014/January-February%202014/better_abstract.html
- Wright, M. C., Schram, L. N., & Gorman, K. (forthcoming). Developmental stages of new instructional consultants: Implications for professional growth. *To Improve the Academy*.

Presentations

- Anderson, O. S., & Finelli, C. J. (2014, June). *A faculty learning community to improve teaching practices in large engineering courses: Lasting impacts*. Presented at 121st ASEE Annual Conference & Exposition, Indianapolis, IN.
- Bates, R. A., Cheville, R. A., Karlin, J. N., Benson, L. C., Finelli, C. J., & Lord, S. M. (2014, October). *Agents for STEM change – Articulating the goals of our community*. Special session at the 44th IEEE/ASEE Frontiers in Education Conference, Madrid, Spain. DOI: 10.1109/FIE.2014.7044308. Winner of the Helen Plants Award – IEEE/ASEE Frontiers in Education Steering Committee.

- Borrego, M. J., Prince, M. J., Nellis, C. E., Shekhar, P., Waters, C. & Finelli, C. J. (2014, June). *Student perceptions of instructional change in engineering courses: A pilot study*. Presented at 121st ASEE Annual Conference & Exposition, Indianapolis, IN.
- DeZure, D., Kalish, A., Kaplan, M., & Ouellett, M. (2014, November). *Leveraging our collective experience: Reflections from long-time faculty developers*. Anchor session at the 39th Annual POD Conference, Dallas, TX.
- Everett, A., Wright, M., Anderson, A., & Fontana, M. (2015, March). *Long-lasting learning of critical thinking skills in a dental curriculum*. Poster presented at American Dental Education Association Annual Session and Exhibition. Boston, MA.
- Finelli, C. J. (2015, March). *Promoting institutional change and improving teaching practices*. Keynote address at Annual Scholarship of Learning and Teaching Conference for Faculty of Science and Technology, Uppsala University, Stockholm, Sweden.
- Finelli, C. J. (2015, March). *Perspectives and priorities in STEM higher education research*. Invited plenary discussion, Centre for Discipline Based Education Research, Uppsala University, Uppsala, Sweden.
- Finelli, C. J. (2015, March). *Promoting faculty adoption of effective teaching practices*. Invited presentation at the School of Engineering Education Seminar, Purdue University, West Lafayette, IN.
- Finelli, C. J., & Borrego, M. J. (2014, June). *An inclusive process for developing a taxonomy of keywords for engineering education research*. Poster presented at 121st ASEE Annual Conference & Exposition, Indianapolis, IN.
- Finelli, C. J., DeMonbrun, M., Borrego, M., Shekhar, P., Henderson, C., Prince, M. J., & Waters, C. K. (2014, October). *A classroom observation instrument for assessing student reaction to active learning*. Presented at 44th IEEE/ASEE Frontiers in Education Conference, Madrid, Spain. DOI: 10.1109/FIE.2014.7044084
- Finelli, C. J., & Rasoulifar, G. (2014, October). *Using and disseminating a taxonomy for engineering education research*. Mini-workshop at the 44th IEEE/ASEE Frontiers in Education Conference, Madrid, Spain. DOI: 10.1109/FIE.2014.7043989
- Fong, C., Gilmore, J., Pinder-Grover, T., & Hatcher, M. (2015, April). *Teaching assistant instructional development in engineering: A test of four programs*. Presented at the 2015 American Education Research Association Conference. Chicago, IL.
- Haynes, M. T., & Pinder-Grover, T. (2015, March). *Leveraging reflection to deepen engineering graduate student instructor professional development*. Poster presented at the CRLT in Engineering Ninth Annual Research and Scholarship in Engineering Poster Session. Ann Arbor, MI.
- Meizlish, D., Wright, M., Howard, J. & Kaplan, M. (2014, November). *Leveraging institutional data to demonstrate our impact: An evaluation of a new faculty program*. Poster presented at the 39th Annual POD Conference, Dallas, TX. Winner of the Robert J. Menges Award for Outstanding Research in Educational Development.
- Niemer, R., Turner, N., & Greer, J. (2014, November). *Leveraging learning analytics: How big data inform our multi-faceted work*. Presented at the 39th Annual POD Conference, Dallas, TX.
- Niemer, R., & Wright, M. C. (2015, January). *Advances in engineering and business teaching methodologies*. Workshop at Universidad de los Andes, Santiago, Chile.
- Niemer, R., & Wright, M. C. (2015, January). *Advances in health sciences teaching and assessment methodologies*. Workshop at Universidad de los Andes, Santiago, Chile.
- Niemer, R., & Wright, M. C. (2015, January). *New directions in teaching and learning*. Presented at Universidad de los Andes, Santiago, Chile.

- Niemer, R., & Wright, M. C. (2015, January). *Presentation on learning analytics*. Presented at Universidad de los Andes, Santiago, Chile.
- Pinder-Grover, T., Brown, M., & Ellis, J. (2014, November). *Virtual writing communities to foster accountability and enhance scholarly productivity*. Presented at the 39th Annual POD Conference, Dallas, TX.
- Richards, L. G., Rowland, J. R., Lord, S. M., Froyd, J. E., Finelli, C. J., Meier, R., Atman, C. J., Jones, E., & Anderson-Rowland, M. R. (2014, October). *Pursuing the frontiers: The history and future of the Frontiers in Education Conference*. Panel presentation at the 44th IEEE/ASEE Frontiers in Education Conference, Madrid, Spain. DOI: 10.1109/FIE.2014.7044187
- Smith, K. A., & Finelli, C. J. (2014, June). *Preparing facilitators for virtual faculty development programs*. Special session at 121st ASEE Annual Conference & Exposition, Indianapolis, IN.
- Schram, L., & Pinder-Grover, T. (2014, November). *Ongoing professional development for educational developers*. Roundtable facilitated at the 39th Annual POD Conference, Dallas, TX.
- Wright, M. C., & Niemer, R. (2015, January). *Advances in humanities and social science teaching methodologies*. Workshop at Universidad de los Andes, Santiago, Chile.
- Wright, M. C., & Niemer, R. (2015, January). *New directions in assessment*. Presented at Universidad de los Andes, Santiago, Chile.
- Zhu, E. (2014, November) *Using technology to enhance teaching and improve student learning*. Presented at Shanghai Jiao Tong University, Shanghai, China.
- Zhu, E. (2014, November) *Useful services and strategies for faculty development*. Presented at Shanghai Jiao Tong University, Shanghai, China.
- Zhu, E. (2014, November) *Design for student engagement and learning*. Presented at Renmin University, Beijing, China.
- Zhu, E., & Turcic, S. (2014, November). *Prizing innovative teaching: Small awards, big impact*. Presented at the 39th Annual POD Conference, Dallas, TX.

Review and Editorial Work

- Canadian Journal of Higher Education (M. Wright)
- The Elementary School Journal (R. Greenberg)
- IEEE Transactions on Education (C. Finelli)
- International Journal for the Scholarship of Teaching and Learning (M. Kaplan)
- International Journal for Sustainability in Higher Education (R. Niemer)
- International Journal of STEM Education (T. Pinder-Grover)
- Journal of Dental Education (M. Wright)
- Journal of Education Technology and Society (E. Zhu)
- Journal of Engineering Education (C. Finelli, T. Pinder-Grover)
- Journal of Faculty Development (M. Kaplan; D. Meizlish, Editorial Board)
- New Media & Society (E. Zhu)
- Professional and Organizational Development Network in Higher Education Conference (POD) (T. Braunschneider, D. Meizlish, R. Niemer, T. Pinder-Grover, A. Smith, M. Wright)
- Studies in Graduate and Professional Student Development (M. Wright)
- To Improve the Academy (M. Wright)

Appendix F: CRLT Regular Staff, 2014-2015

Interim Director	Matthew Kaplan
Administrative Team	Deborah Meizlish , <i>Senior Assistant Director</i> Mary Wright , <i>Director of Assessment and Associate Research Scientist</i>
Director of CRLT in Engineering	Cynthia Finelli (<i>also Research Associate Professor</i>)
Assistant Directors and Instructional Consultants	Meg Bakewell , <i>Assistant Director</i> Theresa Braunschneider , <i>Assistant Director and Co-coordinator for Diversity Initiatives</i> Rachel Niemer , <i>Assistant Director</i> Tershia Pinder-Grover , <i>Assistant Director and Co-coordinator for Diversity Initiatives</i> Laura Schram , <i>Assistant Director</i> Amber Smith , <i>Instructional Consultant</i> Erping Zhu , <i>Assistant Director</i>
CRLT Theatre Program	Sara Armstrong , <i>Artistic Director</i> Courtney Riddle , <i>Company Manager</i> Jessica Von Hertsberg , <i>Performance Coordinator</i>
Administrative Staff	Lori Dickie , <i>Budget Administrator</i> Ryan Hudson , <i>Administrative and Publications Specialist</i> Carolyn Parker , <i>Assistant to the Interim Director</i>
Project Staff	Pam Fisher , <i>Events Coordinator and Multimedia Designer</i> Laura Gonzalez-Garcia , <i>Events Coordinator and Grants Assistant</i> Jeri Hollister , <i>Events Coordinator and Graphic Designer</i> Kathryn Pamula , <i>Events Coordinator</i> Melinda Thompson , <i>Administrative Assistant</i>
Staff in CRLT in Engineering	Shanna Daly , <i>Instructional Consultant and Assistant Research Scientist</i> Carol Lagemann , <i>Financial Specialist and Event Planner</i> William Lloyd , <i>Instructional Consultant</i> Steve McKenzie , <i>Graphic Designer and Event Planner</i>

List does not include postdoctoral research associates, graduate teaching consultants, graduate research assistants, actors, or student assistants.

Notes