IMPACT REPORT

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2018-2022 Academic Years

WPI

Morgan Teaching & Learning Center

KEEP UP THE GOOD WORK.

YOU ARE AWESOME.

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LETTER FROM THE DIRECTOR

To so many of us, the last five years seem like a blur of societal and institutional change and disruption. During a global pandemic and mental health crisis, we made decisions amid uncertainty, felt overwhelmed and let things go, experienced isolation as well as connection, felt multiple scales of grief due to deaths on our campus and around the world, and were inspired by each others' problem-solving and innovation. We've managed rapid change in our educational delivery methods and spaces, the ways we interact with each other, and recentered our attention on the mental health and well-being of our students and each other. Over the same time period, the WPI faculty elevated teaching through enfranchisement and secure contracts for our teaching faculty and a new teaching path to tenure. The Morgan Teaching and Learning Center has been an important institutional partner in navigating all of this change for the better.

After several years of not issuing an annual report, seeing this report highlight the power of our center's distributed model has been deeply gratifying. None of us here in the Morgan Center professes to know the answers or the best way to teach. We recognize that being a student-centered campus is a collective undertaking, not something we can accomplish as individuals. Our model allows us to be nimble in response to emergent and strategic needs. In the last five years, we have partnered with our Technology for Teaching and Learning group to provide online pedagogy training at scale while compensating faculty for some of their time. We fostered organizational development around TechFlex and helped mitigate pandemic effects on pre-tenure career progress. The Center was an essential source of knowledge and strategic action during our mental health crisis and while implementing the teaching path to tenure. Professional learning communities funded by the Center have been building our institutional capacity for educational equity and inclusion through open education resources, inclusive syllabi, and ungrading. Throughout this responsive action, we tended to our core programming, welcoming new faculty to the WPI community of educators and providing support for new student educators serving as Teaching Assistants and Peer Learning Assistants.

This impact report is also well-timed as it comes near the end of my tenure as Director. I write this message having been in the Director position since 2006, with plans to retire in 2024. I am proud of how far the Center has come and I'm delighted that the Morgan Center is now a real team, with 2.5 positions, plus three faculty Associate Directors of specific programs and an affiliated Instructional Designer. I am particularly proud of the Research & Evaluation position that we put into place in 2018 in collaboration with the Center for Project-Based Learning. The expertise of our Research & Evaluation Associate has enabled the Morgan Center to integrate organizational development and faculty development in ways that so clearly benefit WPI. It has been an honor to lead the Morgan Teaching and Learning Center, and I'm confident that it is well positioned for the years ahead.

Chrysanthe Demetry, PhD
Director, Morgan Teaching & Learning Center

Chrys Demetry
Director, Morgan Teaching & Learning Center

> " *None of us here in the Morgan Center professes to know the answers or the best way to teach. We recognize that being a student-centered campus is a collective undertaking, not something we can accomplish as individuals.* "

ABOUT THE CENTER

Teaching in WPI's innovative project-based curriculum is deeply rewarding, challenging, and motivating, through all stages of a faculty career. The Morgan Teaching and Learning Center works collaboratively with a wide range of constituencies to maintain and strengthen instructional effectiveness, student learning, and faculty learning through capacity building. The Center offers evidence-based training and development programs, coaching, and resources for faculty, staff educators, and student teaching assistants.

Throughout its work, the Center advances WPI's mission and lives its values of community, inclusion, respect, innovation, and achievement. Our principle objectives:

- enhancing teaching and student learning
- strengthening links between teaching and learning research and practice
- generating and disseminating knowledge and innovations in teaching and learning
- fostering continuing professional growth in faculty careers
- building communities among educators

The Morgan Family & WPI

In 2010, WPI's Center for Educational Development and Assessment was renamed the Morgan Teaching and Learning Center in recognition of a major gift from the descendants of Charles Hill Morgan. First superintendent of WPI's Washburn Shops in 1865 and founder of Morgan Construction Company in 1888, he was the first of five generations to serve on the WPI Board of Trustees. His great grandson, Paul S. Morgan, was elected to the Board in 1966 and served for 25 years, including five as Chair, during the initiation of the project-based WPI Plan. In his 80s, Paul learned about the role of university centers for teaching and learning and was instrumental in organizing the endowment for this Center. He saw the value of "theory and practice" not just for students, but for faculty as they developed their teaching. We are grateful for the philanthropic commitment and generosity of Paul and the entire Morgan family.

Morgan Teaching & Learning Center Staff

Chrys Demetry
Director
2006-current
Professor,
Mechanical & Materials Engineering

Kimberly LeChasseur
Sr Research & Evaluation Associate
2018-current
Half-time appointment to the
Morgan Teaching & Learning Center

Mary Courtemanche
Operations Manager
2023-current

Zoe Reidinger
TA & PLA Training
2019-current
Associate Teaching Professor,
Biomedical Engineering

Rudra Kafle
TA & PLA Training
2019-current
Associate Professor of Teaching,
Physics

N Aaron Deskins
Faculty Mentoring
2022-current
Professor,
Chemical Engineering

The Center has a dedicated, full-time director who holds a faculty appointment, a full-time operations manager, and leverages part-time affiliated staff and faculty with appointments in their disciplinary-based departments.

Caitlin Keller
Sr Instructional Designer
2016-current
Full-time appointment to
the Academic Technology Center

Past Center Staff

The following faculty and staff worked at the Center during the time span of this report.

Jeanine Dudle
Faculty Mentoring
2019-2022 Interim Director
2019-2020
Associate Professor,
Civil & Environmental
Engineering

Natalie Farny
TA & PLA Training
2017-2019
Assistant Professor
Biology & Biotechnology

Mike Johnson
TA & PLA Training
2019-2021
Associate Teaching Professor,
Mathematical Sciences

Kim Hollan
Operations Manager
2019-2022
Half-time appointment to the
Morgan Center
Half-time on ADVANCE grant

During the pandemic, the Center also hired and trained Online Faculty Champions, who served as local experts and community builders within their departments and across WPI:

Laila Abu-Lail, CEAE
Marja Bakermans,
    DIGS/GPS
John Bergendahl,
    CEAE
Nick Bertozzi, RBE
Marcel Blais, MA
Joshua Cuneo, CS
Aaron Deskins, CHE
Brent French, BUS
Mike Johnson, MA
George Heineman, CS
Greg Lewin, RBE

Anita Mattson, CBC
Maqsood Mughal, ECE
Zoe Reidinger, BME
Laura Roberts, DIGS/
    ID 2050
Gbeton Somasse, SSPS
Sarah Stanlick,
    Cross-Cutting PBL
John Sullivan,
    Cross-Cutting Labs
Ralph Sutter, IMGD
Sarah Wodin-Schwartz,
    MME

Center Programming

Blue hexagons (top row):
- New Faculty Orientation
- Faculty On-Ramp to Teaching[1]
- New Faculty Mentoring Program
- Teaching Assistant Training
- Peer Learning Assistant Training

Orange hexagons (second row):
- Teaching Innovation Grants[1,2]
- Online Pedagogy Workshops[1]
- Project Advising 101
- Associate Professor Mentoring
- Education Grantwriting Services
- Morgan Center Canvas Site
- TPT Canvas Site[3]

Gray hexagons (third row):
- Virtual Micro-courses[1]
- Educators Exchange Teams Site
- Morgan Center Newsletters
- Course Design & Teaching Consultations[1]
- New Programming As Needed

Yellow hexagons (bottom row):
- Food For Thought Teaching & Learning Series
- Class of '57 Teaching Development Travel Grants
- Evaluation & Assessment Support
- SoTL Coaching & Consultations
- Internal Studies of Teaching & Learning at WPI
- Moruzzi Young Faculty Award[2]

Additional Context

Programs in Blue = Supports for New Educators
Programs in Orange = Deepening Learning & Practice Resources
Programs in Gray = Just-In-Time Supports
Programs in Yellow = Resources for Disseminating Innovations

[1] in Collaboration with the Academic Technology Center
[2] in Collaboration with the Educational Development Council
[3] in Collaboration with the Provost's Office & the Committee on Teaching & Research Faculty

Acronyms Used in this Report

ASEE: American Society of Engineering Education
ATC: Academic Technology Center
EDC: Education Development Council
GPS: Great Problems Seminar
FIOT: Faculty Institute for Online Teaching
MHWB: Mental Health & Well-Being
MTLC: Morgan Teaching & Learning Center
NSF: National Science Foundation

OPW: Online Pedagogy Workshop
PD: Professional Development
PBL: Project-Based Learning
PLA: Peer Learning Assistant
SoTL: Scholarship of Teaching and Learning
TA: Teaching Assistant
TPT: Teaching Path to Tenure
WPI: Worcester Polytechnic Institute

Meeting Emergent Needs

The Morgan Center's expertise and cross-disciplinary, decentralized staff allow us to be nimble in responding to emergent needs facing the university. Three such needs recently arose: the pandemic, the mental health and well-being crisis, and the new teaching path to tenure. The Morgan Center adapted its programming, staffing, and budget to address these needs in critical ways that served the university.

Pandemic Response & Supports

When the COVID-19 pandemic began in 2020, the Academic Technology Center mobilized to ensure our technological infrastructure was adequate to continue operations. and to provide technology training at scale. As faculty shifted to the largely uncharted territory of online teaching and, later, hybrid classrooms, the Morgan Center mobilized a new pedagogical infrastructure.

	Spring 2020	Summer 2020	Fall 2020	Spring 2021 Forward
Supporting Community	- Food For Thought: Is Higher Ed Being Disrupted?	- WPI Educators Information Exchange Teams Site created	- Study: Faculty Stress - Finally Friday chats online - Study: Hybrid Teaching Practices	- Study: COVID Disruptions to Tenure
Maintaining WPI's High Quality Teaching	- Faculty consultations on COVID practices	- Online Pedagogy Workshop - Online Faculty Champions recruited to support faculty in each department - Faculty consultations on COVID practices	- Study: Impact of the 2020 Online Pedagogy Workshop - Online Teaching Modules added to TA & PLA trainings - Faculty consultations on COVID practices	- New Micro-course Online Course Design - New Micro-course: Online Teaching - Faculty consultations on COVID practices
Developing Targeted Expertise On Demand		- New syllabus resources on MTLC Canvas Site - WPI Educators Information Exchange Teams Site created - Faculty Institute on Teaching	- New syllabus resources on MTLC Canvas Site - Food For Thought: Active Learning in Online Environments - Weekly MTLC Newsletters	- Supported proposal to NSF COVID-19 DEI Challenge, honorable mention - New Micro-course: Inclusive Syllabus

Timeline of Pedagogical Infrastructure Created in Response to the Pandemic

Impact

MTLC prepared faculty and instructors for teaching online

70%+
WPI faculty trained in online teaching strategies

573
Course materials created by faculty in guided workshops

64
WPI TAs trained in online teaching strategies during the pandemic

66%
TAs found online teaching training module very helpful

126
Resources shared in the Educators' Exchange

312
Views of COVID-related teaching resources in Canvas

3,178
Views of Morgan Center newsletters in 2020-21

123
Faculty responded to 1st pulse survey about their stress and well-being

Faculty who completed the Online Pedagogy Workshops were more likely to add best practices to their courses than those who did not.

—Fall 2020 study

Faculty who completed the Online Pedagogy Workshops improved their classroom communities through a variety of engagement strategies.

—Fall 2020 study

MTLC created community during social isolation

555
Connections across departments at MTLC programs addressing pandemic

71
Faculty connected with each other in the Educators' Exchange

61
Faculty shared experiences in mission-critical interviews

116
Faculty responded to 2nd pulse survey about their stress and well-being

Mental Health and Well-Being Response & Supports

The mental health and well-being crisis may have already been underway throughout the pandemic. It hit the WPI community in force during the 2021-2022 academic year. The Morgan Center remobilized around discussions about the role of faculty and instructors in supporting students and the teaching practices that can boost mental health. New supports also focused on community among faculty to address their well-being.

	Fall 2021	Spring 2022	Summer 2022	Fall 2022 Forward
Supporting Community	- Food For Thought: Mental Health & Inclusive Syllabi - MHWB survey construction - MHWB findings: Undergraduate students - Continuous MHWB conversations with colleagues	- MHWB findings: Faculty - Continuous MHWB conversations with colleagues	- Continuous MHWB conversations with colleagues	- Faculty Burnout community discussion - Continuous MHWB conversations with colleagues
Maintaining WPI's High Quality Teaching	- New in Canvas: Supporting Students through Challenging Times resource - Faculty consultations on MHWB practices - MTLC Newsletters	- New in Canvas: Supporting Students in Times of Crisis - Faculty consultations on MHWB practices - MTLC Newsletters	- New in Canvas: Strategies for Centering Well-Being in WPI Courses - Faculty consultations on MHWB practices - MTLC Newsletters	- Faculty consultations on MHWB practices - MTLC Newsletters - Collaborating on Academic Life Coaching workshop to benefit graduate students
Sustaining New Systems	- Representation on Mental Health & Well-Being Taskforce - New Micro-course: Inclusive Syllabus	- Representation on Mental Health & Well-Being Implementation Team - Department support for integrating MHWB into culture & practices	- Added mental health channel & relieving academic stress channel in the WPI Educators Exchange Teams site - Department support for integrating MHWB into culture & practices	

Timeline of Pedagogical Infrastructure Created in Response to the Mental Health Crisis

Impact

MTLC encouraged faculty to adopt supportive teaching practices

579	837	2,910	91
Views of mental health teaching resources in Canvas	Views of midterm course feedback resources in Canvas	Views of Morgan Center newsletters in 2021-22	Tips & tools shared in Morgan Center newsletters in 2021-22

68% of Mental Health & Well-Being Faculty Survey respondents reported too much work to complete within their scheduled work week. This was a top contributor to their mental health and well-being and was tied, in part, to the interventions put in place to address pandemic and mental health needs on campus. The Morgan Center responded to this feedback by clearly signaling in all communications that pausing was a normal and acceptable reaction; choosing not to participate, or even read notices from the Morgan Center, was affirmed.

MTLC created community amidst campus-wide crisis

146	17	117	483
Connections across departments at MTLC programs for MHWB	Departments represented at MTLC programs for MHWB	Faculty shared experiences in a campus-wide mental health survey	Students shared experiences in a campus-wide mental health survey

> " *Create a culture of support and create a well-connected community for the employees so they feel they belong to a group of people.* "
>
> —faculty member, Mental Health & Well-Being Survey

> " *My job might be less stressful and exhausting if I didn't spend time supporting students, but it's one of the things I do because I think it's necessary* "
>
> —faculty member, Mental Health & Well-Being Survey

Teaching Path to Tenure Response & Supports

As WPI has embarked on an innovative tenure track for teaching mission faculty, the Morgan Center created new resources. These assist faculty in activities aligned with the new tenure criteria, foster community among teaching path to tenure faculty, and inform improvements to the system as it is created. Like other emergent needs, these activities have an impact on WPI's reputation as other universities pay attention to how well we are able to meet the original objectives of providing this innovative option for teaching-mission faculty.

	Fall 2021	Spring 2022	Summer 2022	Fall 2022 and Beyond
Fostering Community	- Interviews with Cohort 1 members to provide feedback - Dedicated alerts for SoTL opportunities	- Listening Session about supports & resources needed - Created a Q&A Padlet - Dedicated alerts for SoTL opportunities	- Dedicated alerts for SoTL opportunities - Coordinated with the new Committee on Teaching & Research Faculty	- Interviews with Cohort 2 members to provide feedback - Coordinated the development of a TPT FAQ document - Cohosting info sessions with the new Committee on Tenure & Research Faculty - Dedicated alerts for SoTL opportunities
Supporting Capacity Building for TPT Tenure	- SoTL Sessions for TPT faculty - TPT Faculty consultations - SoTL collaborations	- TPT Faculty consultations - SoTL collaborations - Relaunched the Class of '57 Teaching Development Travel Grants for teaching faculty	- Created a reporting mechanism to address concerns in real-time - SoTL collaborations	- TPT Faculty consultations - SoTL collaborations
Informing New Systems	- Study: TPT Process Evaluation, Year 1 - New to Canvas: Self-assessment tools - New to Canvas: Narrative writing tools - New to Canvas: examples of TPT applications	- Provided input on revisions to TPT application - Workshop for Department Tenure Committee members & Department Heads	- Supported Provost in constructing gap analysis tool	- Study: Progress on Year 1 TPT Process Recommendations - Study: TPT Process Evaluation, Year 2 - Workshop for Department Tenure Committee members & Department Heads

Timeline of Supports Created in Response to the Teaching Path to Tenure

Impact

MTLC informed new systems for the teaching path to tenure

15	**22**	**32**	**83%**
Major changes made based on process study findings	Recommendations made to improve application, selection, & support	Teaching faculty shared their experiences in process studies	Department Heads viewed dedicated Teaching Path to Tenure Canvas site
7	**17**	**801**	**25%**
New programs created or priority given to teaching-mission faculty	New tools created to navigate the application & tenure process	Views of pages in dedicated Teaching Path to Tenure Canvas site	Views of Canvas site on examples of applications

Suggested revisions to the application	Curated exemplars & new tools	Hosted sessions on crafting narratives	Provided feedback on applications

MTLC increased teaching-mission tenure track faculty members' capacity to meet tenure criteria

73%	**77%**	**300**	**30%**
Teaching-mission tenure track faculty engaged in capacity building	Teaching-mission tenure track faculty supported in scholarly projects	Referrals to dissemination opportunities	Teaching-mission tenure track faculty awarded travel grants for dissemination

CORE OPERATIONS
Enhancing Teaching & Student Learning at WPI

The Morgan Teaching and Learning Center provides evidence-based programming to educators across the university to maintain a high quality of teaching within our unique educational setting.

MTLC built capacity for high quality teaching for large segments of WPI

707
WPI faculty & staff engaged in programming to enhance teaching

77%
New faculty hires welcomed at New Faculty Orientation

112
Faculty learned new strategies at Project Advising 101

65
Staff educators engaged in programming to enhance teaching

250+
Teaching Assistants trained in best practices for teaching

215
Peer Learning Assistants trained in best practices for teaching

1,622
Views of teaching resources in Morgan Center Canvas site

6,088
Views of Morgan Center newsletters

Home

Announcements ⑤

Modules
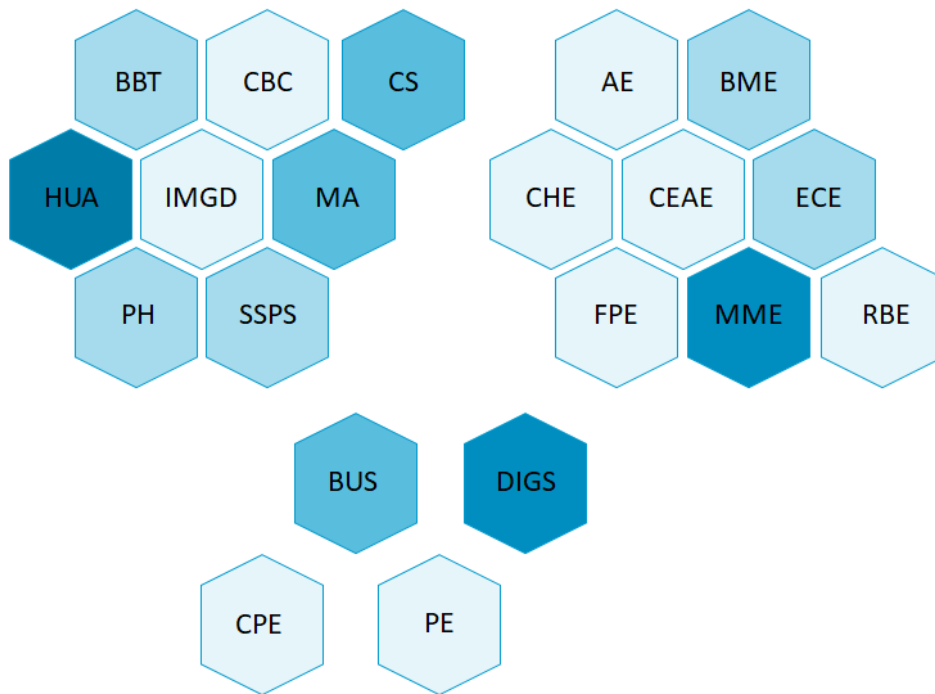
Morgan Teaching and Learning Center

Welcome!

This site is a resource repository for course instructors, project advisors, academic advisors and mentors, with contributions from many WPI educators. In several "toolkits" we share examples of materials that you can adapt for your own use. We also curate deeper resource collections on topics including course design, student engagement and inclusion, project-based learning, and assessment of teaching. In additional modules, we archive materials and recordings, when available, from workshops and events that we host, along with our newsletters and internal studies conducted by our Research & Evaluation Associate. We enjoy meeting with colleagues to discuss any of these resources! The WPI Educators' Information Exchange ⤷ (Teams site) is also a great place for follow-up conversation and Q&A. If you're looking for something and can't find it, or if you have suggestions for improvement of this site, please reach out to morgan-center@wpi.edu.
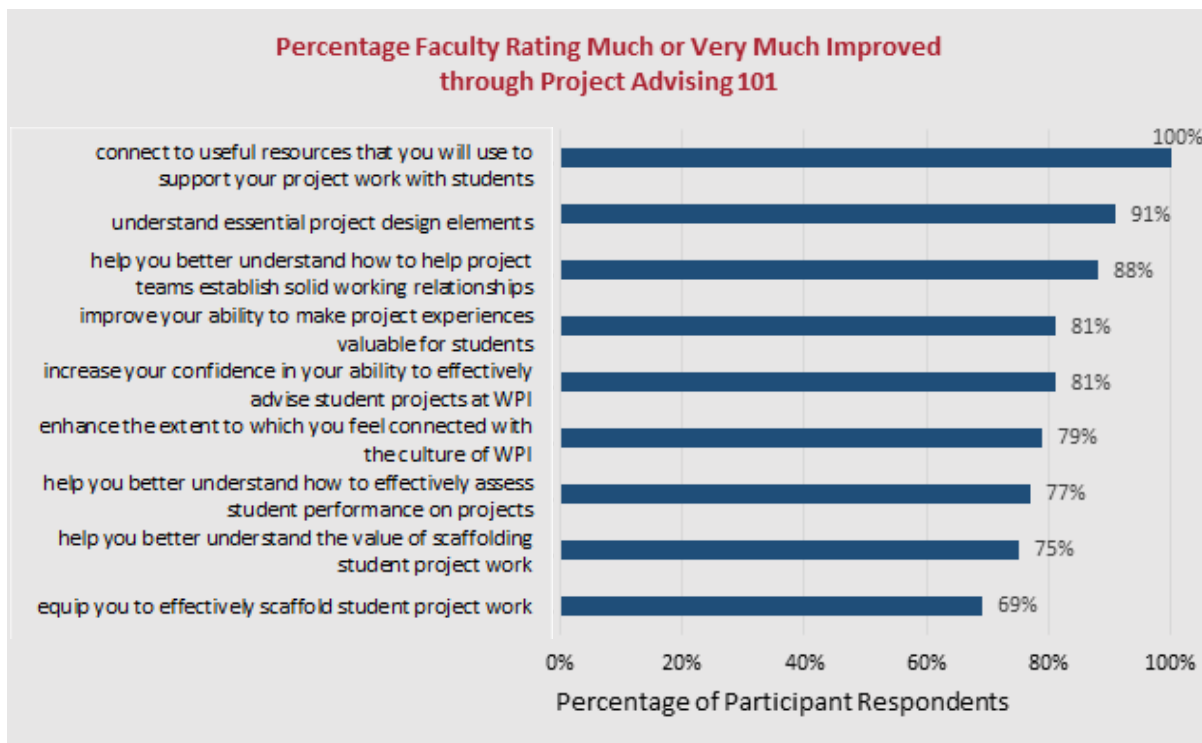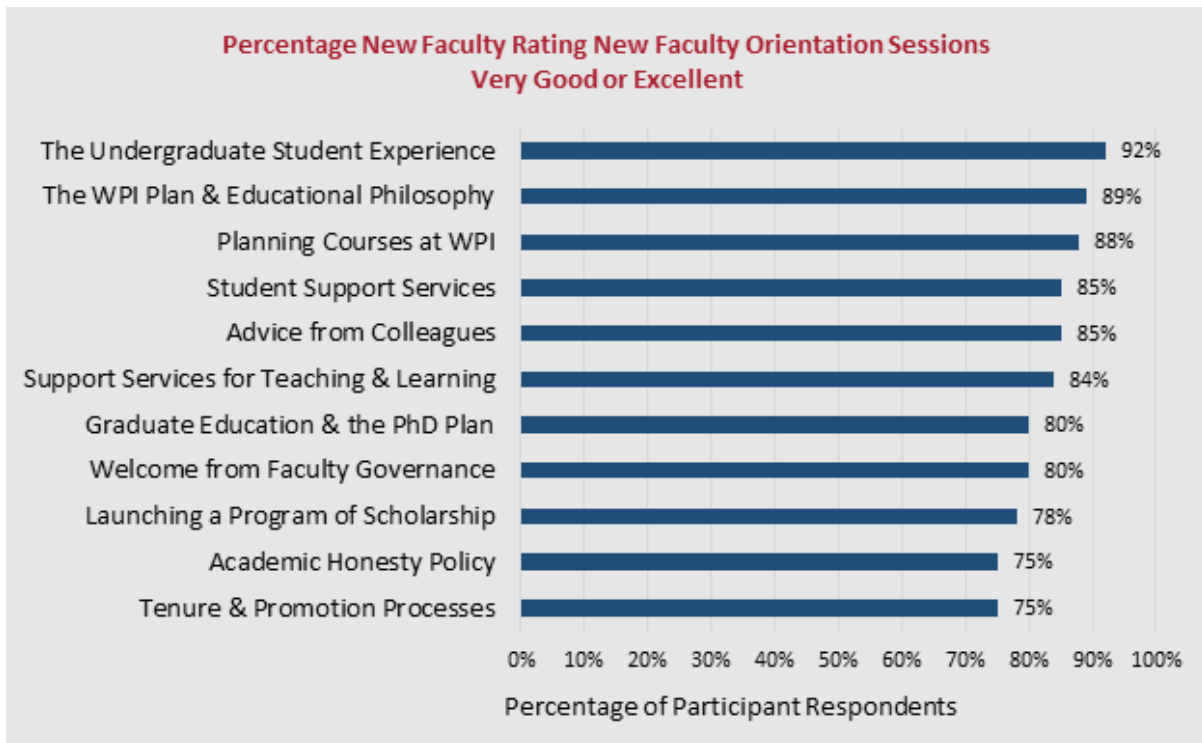
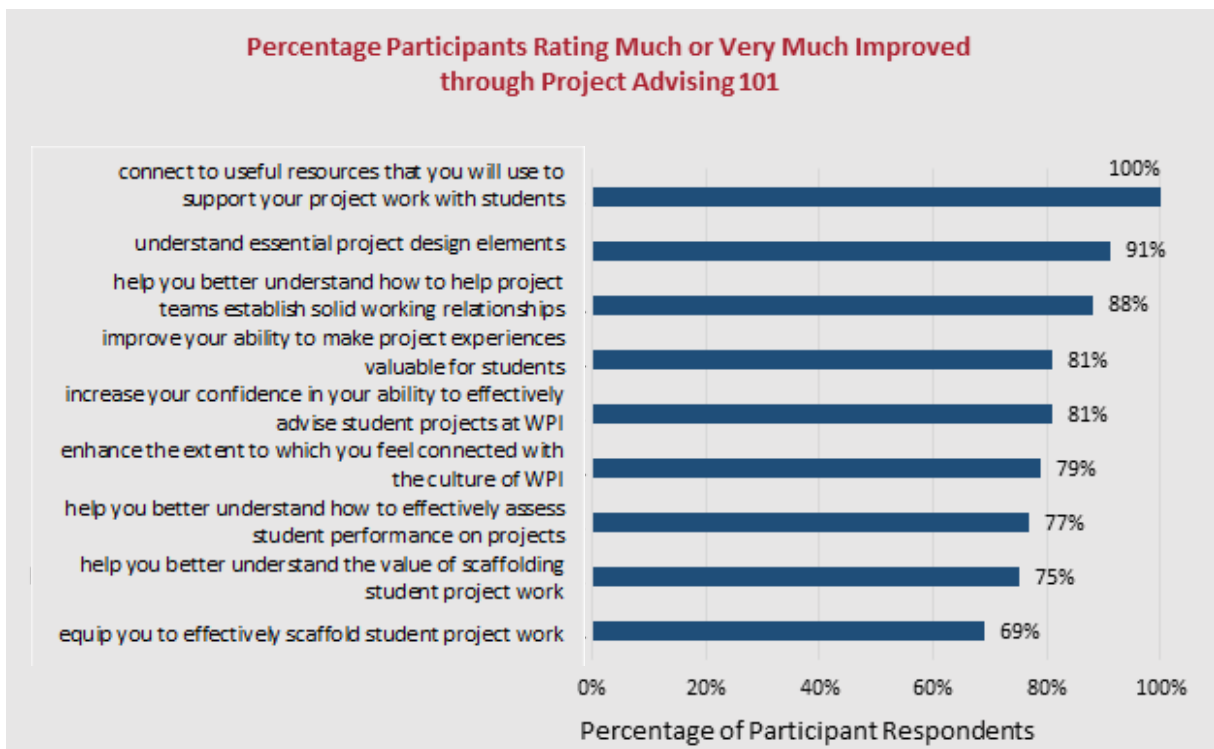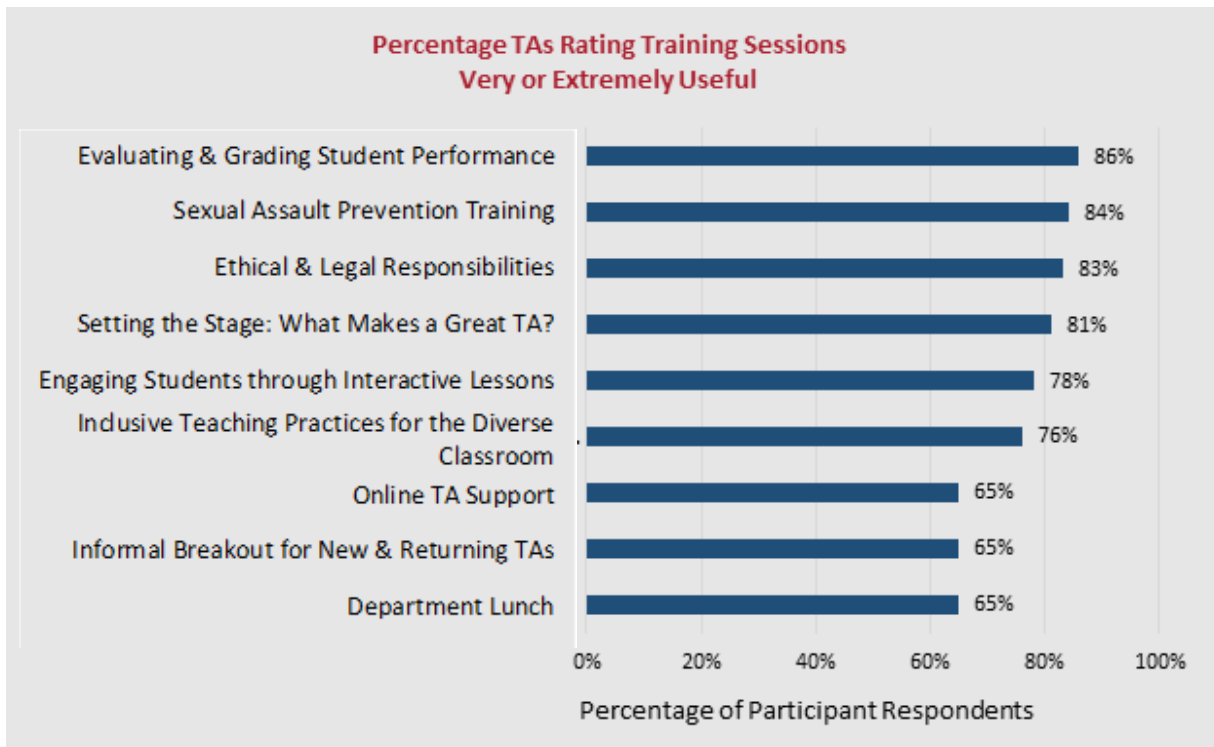Number of MTLC Engagements within Departments by Quintiles

Additional Context

- Top Quintile for Programming Engagements
- Second Quintile for Programming Engagements
- Third Quintile for Programming Engagements
- Fourth Quintile for Programming Engagements
- Bottom Quintile for Programming Engagements

Capacity building provided by the Morgan Center is of high quality

Percentage New Faculty Rating New Faculty Orientation Sessions Very Good or Excellent

Session	Percentage
The Undergraduate Student Experience	92%
The WPI Plan & Educational Philosophy	89%
Planning Courses at WPI	88%
Student Support Services	85%
Advice from Colleagues	85%
Support Services for Teaching & Learning	84%
Graduate Education & the PhD Plan	80%
Welcome from Faculty Governance	80%
Launching a Program of Scholarship	78%
Academic Honesty Policy	75%
Tenure & Promotion Processes	75%

Percentage of Participant Respondents

Percentage Faculty Rating Much or Very Much Improved through Project Advising 101

Item	Percentage
connect to useful resources that you will use to support your project work with students	100%
understand essential project design elements	91%
help you better understand how to help project teams establish solid working relationships	88%
improve your ability to make project experiences valuable for students	81%
increase your confidence in your ability to effectively advise student projects at WPI	81%
enhance the extent to which you feel connected with the culture of WPI	79%
help you better understand how to effectively assess student performance on projects	77%
help you better understand the value of scaffolding student project work	75%
equip you to effectively scaffold student project work	69%

Percentage of Participant Respondents

Percentage TAs Rating Training Sessions Very or Extremely Useful

Session	Percentage
Evaluating & Grading Student Performance	86%
Sexual Assault Prevention Training	84%
Ethical & Legal Responsibilities	83%
Setting the Stage: What Makes a Great TA?	81%
Engaging Students through Interactive Lessons	78%
Inclusive Teaching Practices for the Diverse Classroom	76%
Online TA Support	65%
Informal Breakout for New & Returning TAs	65%
Department Lunch	65%

Percentage of Participant Respondents

Percentage Participants Rating Much or Very Much Improved through Project Advising 101

Item	Percentage
connect to useful resources that you will use to support your project work with students	100%
understand essential project design elements	91%
help you better understand how to help project teams establish solid working relationships	88%
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help you better understand the value of scaffolding student project work	75%
equip you to effectively scaffold student project work	69%

Percentage of Participant Respondents

79%

of participants in Project Advising 101 reported that it enhanced their connection to the culture of WPI

What Participants Say:
New Faculty Orientation

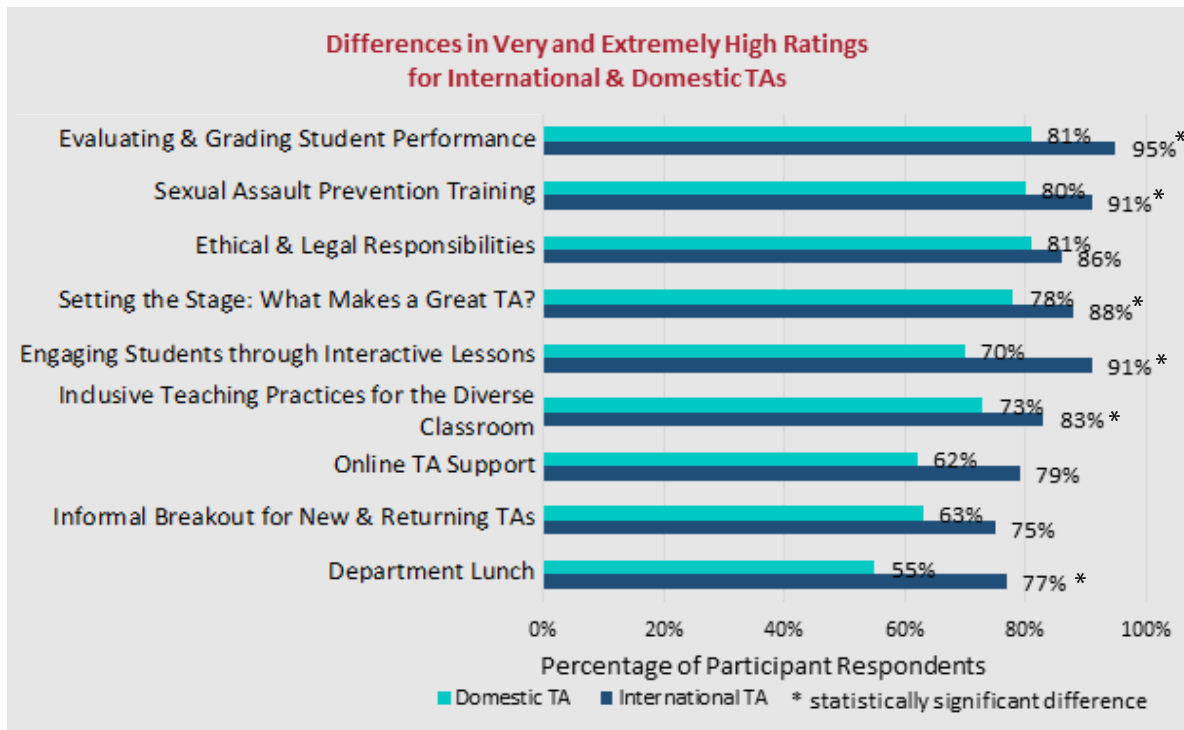" Terrific in-depth introduction to 7-week terms and other WPI specialities. "

" A message that we got--explicitly and implicitly--was that the university wants us to succeed, and it provides the support and clear guidance to help you do so. It really is a huge positive and to have this week dedicated to onboarding. "

" The program was a godsend. I experienced nothing like it in my previous position ... it clearly signaled to me that WPI is invested in my (our) success. I am grateful for that. "

" The whole day was wonderful. It boosted my enthusiasm, and made me feel like I definitely made the right choice by joining the WPI community. "

Community Among International TAs

TA training is particularly helpful for our international students. As WPI increasingly relies on international recruiting, this community building contributes a valuable service to the university.

Differences in Very and Extremely High Ratings for International & Domestic TAs

Category	Domestic TA	International TA
Evaluating & Grading Student Performance	81%	95% *
Sexual Assault Prevention Training	80%	91% *
Ethical & Legal Responsibilities	81%	86%
Setting the Stage: What Makes a Great TA?	78%	88% *
Engaging Students through Interactive Lessons	70%	91% *
Inclusive Teaching Practices for the Diverse Classroom	73%	83% *
Online TA Support	62%	79%
Informal Breakout for New & Returning TAs	63%	75%
Department Lunch	55%	77% *

Percentage of Participant Respondents

■ Domestic TA   ■ International TA   * statistically significant difference

Strengthening Links between Teaching and Learning Research and Practice

Faculty and instructors who are particularly motivated to use evidence-based teaching practices can participate in targeted programming and coaching through the Morgan Center.

MTLC provided targeted capacity building in the use of best practices in online teaching

231 Faculty enrolled in Online Pedagogy Workshops	**52%** Participants completed the Online Pedagogy Workshop	**129** Faculty enrolled in the Faculty Institute for Online Teaching	**64%** Participants completed the Faculty Institute for Online Teaching
40 Discussions about online teaching moderated in OPW	**236** Faculty reflections on online teaching best practices completed in OPW	**27** Discussions about online teaching moderated in FIOT	**279** Faculty reflections on online teaching best practices completed in FIOT

Changes to Improve Programming

- **Scaling Online Capacity.** Caitlin Keller and Valerie Smedile-Rifkin revised the existing Faculty Institute for Online Teaching to allow for dramatic increases in participation during the pandemic. The repackaged Online Pedagogy Workshop demonstrates best practices for designing inclusive, active learning experiences for students.

- **New Grantwriting Capacity.** In 2018, the Morgan Center hired a half-time education researcher and evaluator, Kimberly LeChasseur. She added coaching in developing grant proposals about education innovations to the Center's offerings, as well as providing evaluation design. She has also generated resources for grounding claims about education in empirical literature.
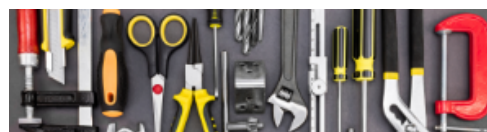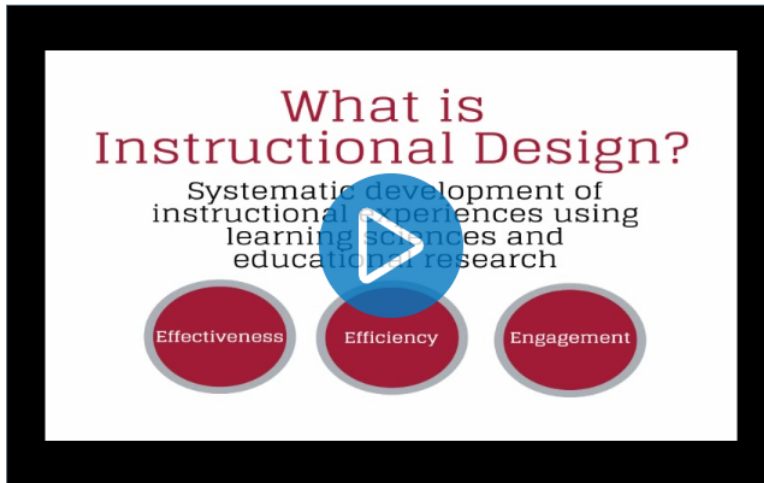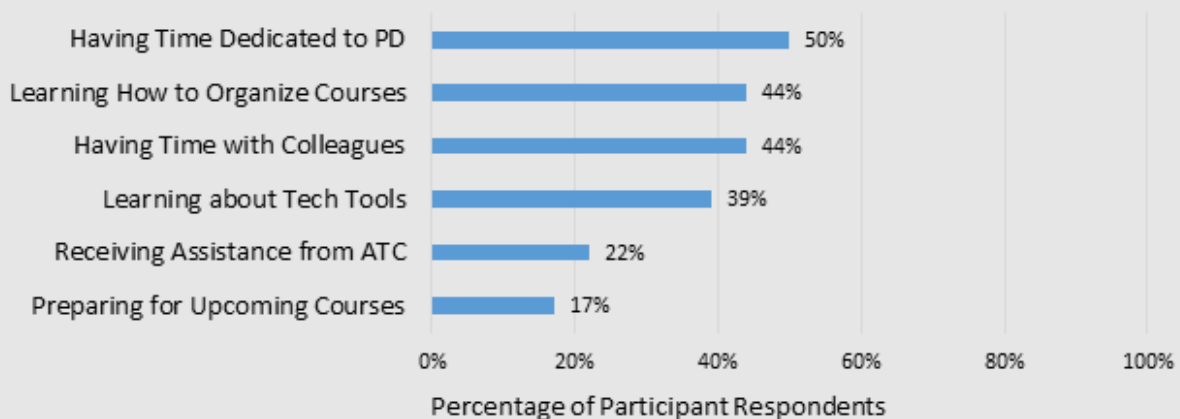
Course Syllabi

Education Grantwriting

Introduction to Instructional Design & Backwards Design

- Watch Introduction to Instructional Design

After completing the Faculty Institute for Online Teaching or the Online Pedagogy Workshop, faculty have the opportunity to continue their learning during the next course. Instructional designers Caitlin Keller and Valerie Smedile-Rifkin offer individualized consultations on course innovations as they arise post-training during implementation.

**Percentage of Faculty Participants in
2020 Online Pedagogy Workshops Indicating Types of Value**

Having Time Dedicated to PD	50%
Learning How to Organize Courses	44%
Having Time with Colleagues	44%
Learning about Tech Tools	39%
Receiving Assistance from ATC	22%
Preparing for Upcoming Courses	17%

Percentage of Participant Respondents

Strengthening links between teaching and learning research and practice has improved teaching at WPI

107
New syllabi created by faculty using best practices

803
New course materials created by faculty using best practices

69%
Completers of Online Pedagogy Workshops reorganized a course

54%
Completers of Online Pedagogy Workshops tried a new practice

Faculty changes after the Online Pedagogy Workshops in Summer 2020

Reorganized courses to help students navigate

revised syllabus for readability, added a discussion board for crowdsourcing solutions to course issues, changed due dates to a consistent weekly structure, and injected "just in time" tips

Included strategies to encourage student participation

regular polling on the material, having someone dedicated to monitoring the chat, and telling students often that they are there for them

Embedded strategies for students to scaffold processing

added discussion forums, devoted time each week to synthesizing new material

Included new active learning assignments

replaced a lecture each week with a group project, reorganized problem sets thematically around real world issues, and adjusted activities to explicitly simulate job tasks

MTLC provided evidence for claims made about education activities in grant proposals

62
Faculty & staff leveraged MTLC consultations in grantwriting

172
Faculty & staff viewed resources for education grantwriting
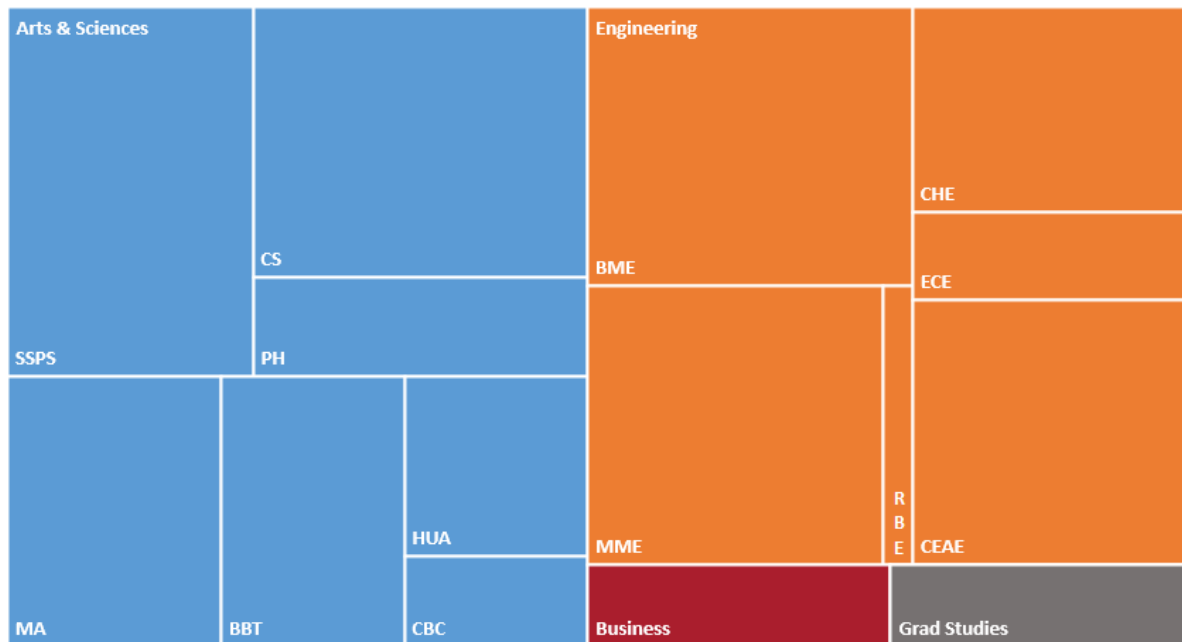
560
Views of resources for education grantwriting in Canvas site

62
Citations provided in annotated literature reviews of best practices

Grant Support by Department & School
(97 grantwriters total)

■ Arts & Sciences ■ Engineering ■ Business ■ Staff

Arts & Sciences
CS
SSPS
PH
MA
BBT
HUA
CBC
Engineering
CHE
BME
ECE
MME
R B E
CEAE
Business
Grad Studies

Strengthening links between teaching and learning research and practice has improved grant productivity

$4.1m
CAREER grants awarded with MTLC support

83%
CAREER proposals awarded had MTLC support

123
Evaluation plans designed for education activities in grant proposals

42%
Success rate of grants including the evaluator on staff at MTLC

Generating and Disseminating Knowledge and Innovations in Teaching and Learning

Multiple types of scholarship are valued in the tenure criteria for teaching mission faculty and in the promotion criteria for both teaching and dual mission faculty. Innovating within one's teaching, assessing the results, and disseminating new knowledge among colleagues, both at WPI and across higher education, are supported by the Morgan Teaching and Learning Center.

MTLC supported knowledge and innovation generation among a large share of WPI faculty and professional staff

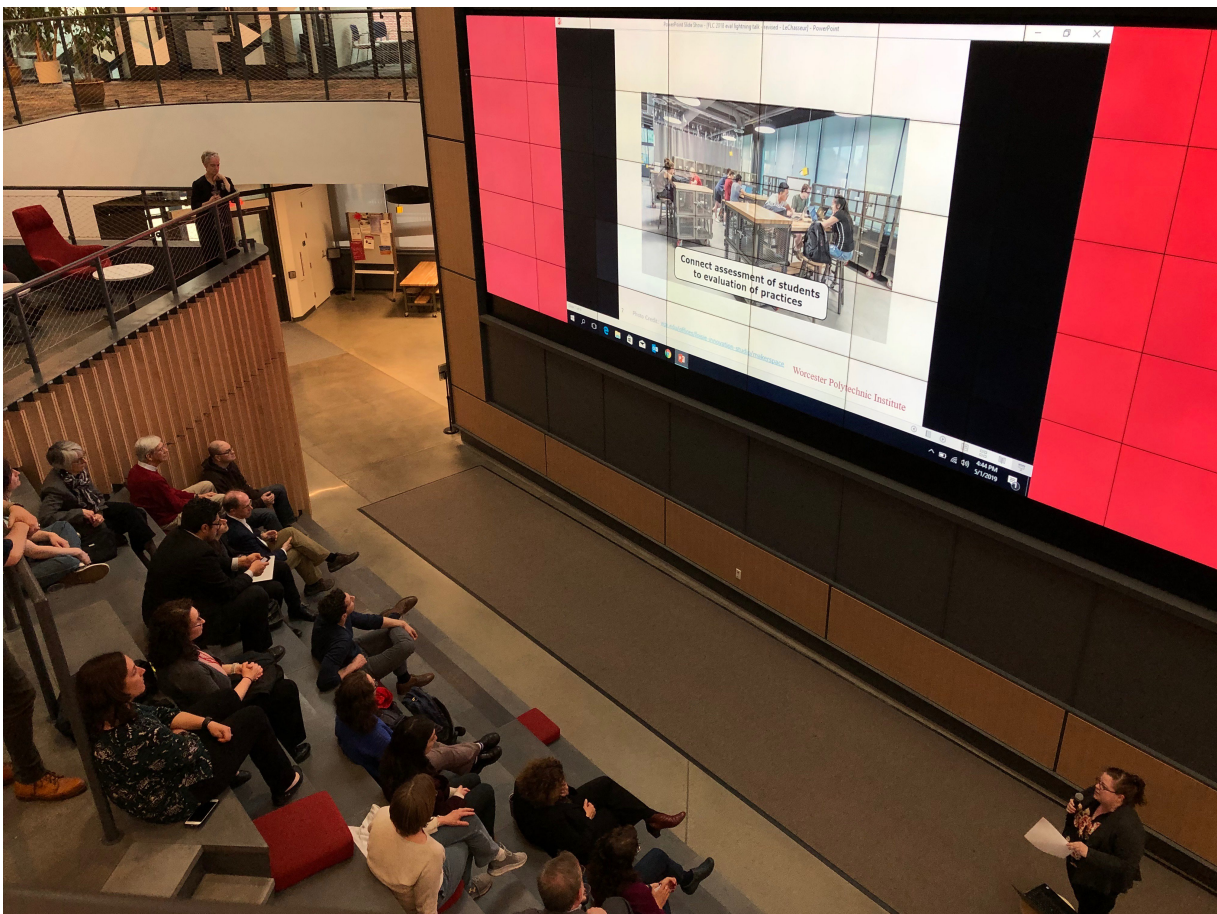| 56	51	229	64
Faculty & staff were awarded Teaching Innovation Grants	Faculty & staff shared teaching innovations in Food For Thought sessions	Faculty & staff learned about innovations in Food For Thought sessions	Faculty coached during Scholarship of Teaching & Learning projects

MTLC provided capacity building in generating knowledge about teaching and learning

23
Projects funded by the MTLC, EDC, & ATC

$326k
Internal funding provided to support teaching innovations

123
Evaluations designed in the MTLC for education innovations

31
Faculty innovation project proposals coached for internal funding

Teaching Innovation Grant Topic Examples

Project-Based Learning
Effectiveness of Course Evaluations
Visual Communication
Global & Multicultural Competency
STEM for Social Justice
Research Experiences in Biology
Hands On Learning in Physics
Portfolios in IMGD
Social Science Methods for IQP
Innovations in Music Technology
Curricula about Latin America

Food For Thought Topic Examples

Open Educational Resources
Culturally Responsive Teaching
Inclusive Syllabi
PBL in Large Enrollment Courses
Social Justice in STEM
Team Creation & Peer Evaluation
Using Metaphors
Learning to Write & Writing to Learn
Active Learning in Online Spaces
Ungrading

MTLC provided targeted support for disseminating knowledge and innovations in teaching and learning

23
Food For Thought sessions facilitated by faculty & staff

3
Scholarship of Teaching & Learning sessions offered

44
Assessment tools created and/or deployed with faculty

55
Consultations provided on scholarly projects

MTLC programming led to increased innovations in teaching and learning at WPI

58	**5**	**7+**	**12**
Courses piloted or revised with Teaching Innovation Grants	Curricula programs scaled up after Teaching Innovation Grants	Departments & programs adopted innovative practices at scale	Teaching tools created & shared with colleagues

Izabela Stroe and Rudra Kafle developed a Studio course in Electricity and Magnetism for the Physics Department in 2018. In place of a lecture-based course, the studio approach integrates hands-on and laboratory activities to support greater student engagement. The course was piloted with 17 students, who reported high degrees of student satisfaction - more than 90% valued the approach. Faculty have expanded the approach and nearly all students now pass the course.

Aarti Madan and John Galante used seed funding from a Teaching Innovation Grant to center Latin American and Caribbean Studies in the WPI curriculum. The pair collaborated with six faculty to create new curricula in the humanities and arts. They have since launched a new minor in Latin America and Caribbean Studies and received a Department of Education Undergraduate International Studies and Foreign Language Program grant to continue their work.

Faculty collaborations with the MTLC generated substantial knowledge about WPI's innovative education

24
Courses studied
by faculty
in collaboration
with the MTLC

1,589
Students' learning
assessed
in collaboration
with the MTLC

2,236
Alumni responses
to a survey
co-designed by
the MTLC

483
Students
shared experiences
in a campus-wide
mental health survey

7
Studies about WPI
conducted by
the MTLC

64
Faculty
interviewed for
MTLC studies

116
Faculty
responded to a pulse
survey about their
stress mid-pandemic

117
Faculty shared
experiences in
a campus-wide
mental health survey

Supporting WPI as a Learning Organization

Improving Courses

*faculty trainings
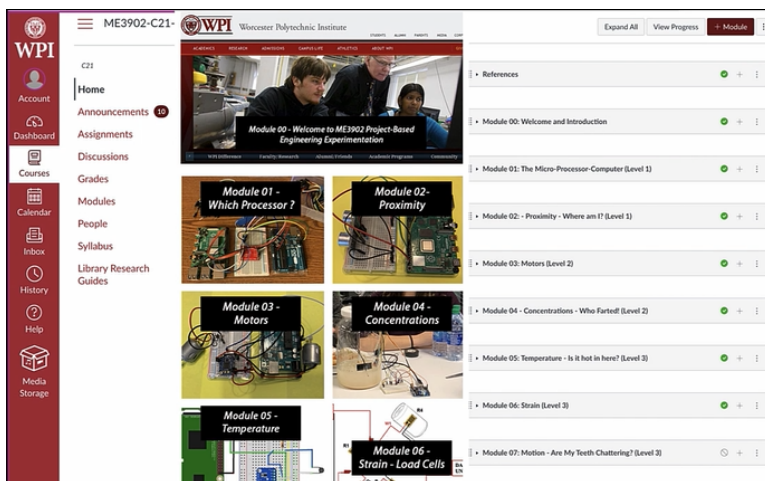instructional design
consultations
assessment support*

Responding to Institution Needs

*strategic studies &
recommendations
to President,
Provost, faculty
governance,
department heads;
improving learning
systems*

Advancing Knowledge

*collaborative studies
on unique elements
of our education
approach leveraging
programmatic &
institutional data*

Even during virtual conferences of the pandemic, the Morgan Center supported successful conference presentations and papers. Pandemic course innovations were shared beyond WPI for others to learn.

MTLC supports contributed to the dissemination of innovations beyond WPI

10	5	2,422	5
Presentations at conferences given after Teaching Innovation Grants	Journal articles published with MTLC support	Views of the journal articles published with MTLC support	External grants submitted to continue Teaching Innovation Grants

8	4	1,074	$19k
Universities adopting teaching practices from internal grants	ASEE awards won for papers supported by the MTLC	Downloads of award-winning ASEE papers	Funding provided to faculty for conference travel

Fostering Continuing Professional Growth

Faculty and instructors of all levels and positions can access professional development opportunities offered through the Morgan Teaching and Learning Center.

> " My mentor is invaluable and allows me to openly ask questions without feeling silly or inappropriate. "

MTLC supports early career development among our faculty

33 Early career faculty provided a consultation with MTLC experts	**83%** Faculty who received scholarly coaching were early career	**108** New faculty provided at least one mentor their first year at WPI	**87** Faculty mentors have volunteered to support new faculty mentees
83% NSF CAREER proposals awarded had MTLC support	**$4.1m** NSF CAREER grants awarded with MTLC support	**48%** Faculty funded by Teaching Innovation Grants were early career	**70%** Travel grants provided were to early career faculty

MTLC empowers teaching mission faculty to continue their professional growth

48	**60%**	**46%**	**$18k**
Teaching mission faculty provided a consultation with MTLC experts	Faculty receiving scholarly coaching are teaching mission faculty	Faculty funded by internal EDC grants were teaching mission	Travel grants provided to teaching mission faculty

First Cohort of Teaching Mission Tenure Track Faculty

31

Faculty joined the teaching path to tenure and were supported by MTLC programming and resources

" Thank you for your support, we truly appreciate your energy and union building spirit. "

" I love this feedback form! Thank you so much! "

Second Cohort of Teaching Mission Tenure Track Faculty

47% Teaching Mission Tenure Track Faculty Awarded Teaching Innovation Grants

- redesigned physics courses to use a studio approach
- created cross-disciplinary urban ecology labs
- developed hands on course activity for mechanical engineering
- deployed digital storytelling for intercultural communications

- created infrastructure for portfolios in IMGD
- facilitated new Latin American & Caribbean Studies coherence for a pilot cohort of students
- curated lesson activities on cultural factors in project design
- designed a guide for producing visual & multimedia deliverables

Building Community Among Educators

As one of the few offices devoted to faculty growth across the entire university, the Morgan Teaching and Learning Center plays a special role in building community. The Center fosters intellectual exchange related to the core educational mission of WPI while supporting faculty as they develop their practice as educators.

MTLC helps faculty transition to WPI

77%	112	108	87
New faculty hires welcomed at New Faculty Orientation	Faculty new to WPI's PBL attended Project Advising 101	New faculty provided a mentor their first year at WPI	Faculty mentors have volunteered to support new faculty mentees

A Top Trend in Feedback about New Faculty Orientation:

" *The whole day was wonderful. It boosted my enthusiasm, and made me feel like I definitely made the right choice by joining the WPI community.* "

" *Hearing from Craig Shue [at Launching Your Research Program] was very inspirational.* "

" *Orientation has really helped me feel like a part of the WPI community already. Thank you!* "

" *Excellent hands-on activities where we could bring out own questions/ concerns and explore the answers together.* "
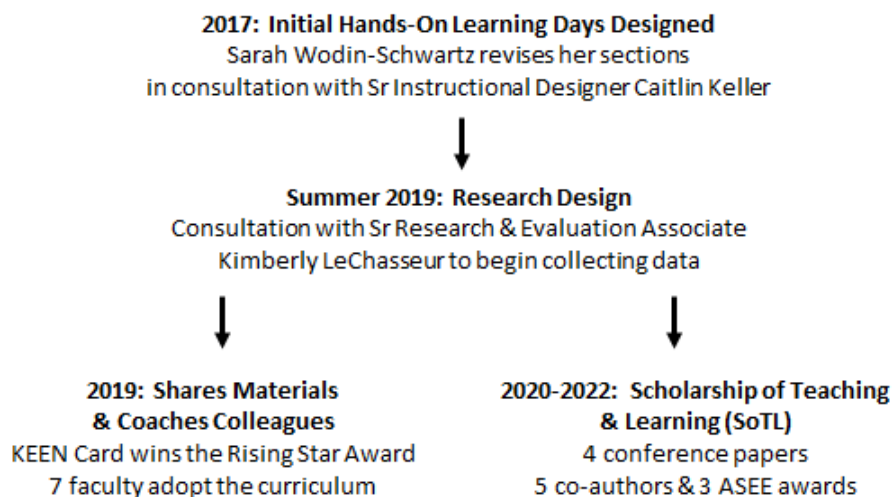
Scaling Change through Communities of Practice

Community building has a direct relationship with spreading and scaling up innovative practices. While the Center cannot take credit for the incredible work of our faculty, we have been instrumental in providing services and supports to seed communities of practice.

Sarah Wodin-Schwartz, Yihao Zheng, Adam Powell, & Sneha Narra
Department of Mechanical & Materials Engineering

Hands On Learning Days for Teaching and Learning

Soon after joining WPI, Sarah Wodin-Schwartz began creating hands-on activities for her sections of *Introduction to Statics*. The activities replace one lecture each week to help students connect their intuition about the world with their growing conceptual knowledge. Sr Instructional Designer Caitlin Keller provided coaching on student learning objectives and Sr Research and Evaluation Associate Kimberly LeChasseur provided guidance on assessment and evaluation. Prof. Wodin-Schwartz then shared the lesson plans, materials, and assessments with colleagues also teaching the course. Profs. Powell, Zheng, and Narra agreed to follow the same data collection procedures and together they have constructed a dataset of 511 students across 8 sections. With Kimberly's methodological expertise, Prof. Wodin-Schwartz and colleagues have published four papers at ASEE, winning two best paper awards and one best presentation award.

2017: Initial Hands-On Learning Days Designed
Sarah Wodin-Schwartz revises her sections
in consultation with Sr Instructional Designer Caitlin Keller

↓

Summer 2019: Research Design
Consultation with Sr Research & Evaluation Associate
Kimberly LeChasseur to begin collecting data

↓ ↓

2019: Shares Materials & Coaches Colleagues
KEEN Card wins the Rising Star Award
7 faculty adopt the curriculum

2020-2022: Scholarship of Teaching & Learning (SoTL)
4 conference papers
5 co-authors & 3 ASEE awards

> *Collaboration between faculty, from formal initiatives to informal conversations around teaching, allows us to maximize limited time and staffing while sharing best practices. Diffusion can be slow, but it allows faculty to be exposed to ideas in low stakes environments and grow more authentically.*
>
> **Caitlin Keller, Sr Instructional Designer**

Marja Bakermans, Anna Gold, Lori Ostapowicz-Critz, Courtney Kurlanska, Sarah Stanlick, William San Martín, Geoff Pfeifer, Esther Boucher-Yip, Althea Danielski, Mohammed El Hamzaoui, Joshua Cuneo, Adam Powell, Sarah Wodin-Schwartz, Ben Pollard, Gillian Smith

Global School, Schools of Arts & Science and Engineering, & the Gordon Library

Open Educational Resources Community of Practice
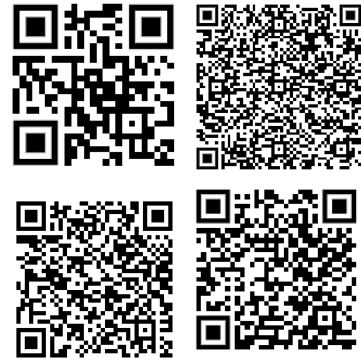
Multiple projects designing and studying open educational resources (OERs) have emerged at WPI, forming a vibrant community of practice. The year after a Food for Thought seminar on OERs, led by librarians, the EDC funded a Professional Learning Community (Cuneo, Kurlanska, Pfeifer, Powell, Wodin-Schwartz) and awarded another group a Teaching Innovation Grant to begin leveraging OERs for English Language Instruction (Boucher-Yip, Danielski, El Hamzoui). Subsequently, a team including Bakermans, Gold, Ostapowicz-Critz, Kurlanska, and Stanlick participated in AAC&U's OER Initiative and was awarded two years of WIN funding to seed a WPI fellows program. They also integrated additional faculty (Pollard, Smith) into another PLC on OER and Open Pedagogy. Together with San Martín, Pfeifer, and Sr Research & Evaluation Associate Kimberly LeChasseur, Bakermans has examined social annotation of OERs in five courses, with additional research including 20+ sections and more than 200 students. To date, the community of practice has spread the use of OERs to more than 40 courses, established an open digital archive of OERs and related research, published a peer reviewed journal article, presented their work at several conferences, and is now leveraging several smaller grants to write larger proposals for funding.

2018-19: Food for Thought Seminar
"Getting Your Start with OERs"

2019-20: Professional Learning Community
"Open Educational Resources"

2019-20: Teaching Innovation Grant
"OERs for English Language Instruction"

2020-21: AAC&U OER Initiative
Team creates WPI website, blog, OER collection, & conducts study of faculty's OER practices

2020-21: Social Annotation using Perusall
in 5 courses by Profs. Bakermans, San Martín, & Pfeifer

**2022-2023
EMPOwER Faculty Fellows Program**
Funded by Women's Impact Network

WPI Self-Study
Funded by the RIOS Institute

Professional Learning Community
"Building Capacity for Open Pedagogy and Open Educational Resources at WPI: Increasing Inclusion and Student Agency"

Spring 2021 – Ongoing: Scholarship of Teaching & Learning
with Sr. Research & Evaluation Associate Kimberly LeChasseur

Fall 2022: External Dissemination
Article published in *Journal for Multicultural Education*
Presentation at Open Education Conference

2023 – Ongoing: External Funding
Early successes leveraged for proposals (e.g., NSF, Spencer Foundation)

2023-24: EMPOwER Faculty Fellows Program
Funded again by Women's Impact Network

Lindsay Davis, Crystal Brown, Michelle Ephraim, Rebecca Moody, Francesca Bernardi, Zoe Reidinger, Gillian Smith, Raisa Trubko, & colleagues

Departments of Humanities & Arts, Social Science & Policy Studies, Physics, Mathematical Sciences, Biomedical Engineering, & Computer Science

Inclusive Syllabi & Other Culturally Responsive Practices

Recently, a local Community of Practice has grown around inclusive syllabi and other culturally responsive practices. In 2020-21, Lindsay Davis, Crystal Brown, Michelle Ephraim, Rebecca Moody, Francesca Bernardi, Raisa Trubko, Zoe Reidinger, and Gillian Smith were awarded a Teaching Innovation Grant to support the development of gender-inclusive curriculum pathways. The group facilitated a Food For Thought in Fall 2021 for 27 colleagues, followed by the release of a new asynchronous micro-course, *Inclusive Syllabus*, designed by Sr Instructional Designer Caitlin Keller. To date, 59 faculty have engaged in the modules of the micro-course, which also offers structured assignments for those updating their syllabi and course materials. Profs. Bernardi, Brown, Davis, Ephraim, Moody, and Trubko gathered data about syllabi at WPI and submitted their first research manuscript in Spring 2023. They will pilot workshops with four departments in the School of Arts & Sciences (MA, PH, BBT, & DS) in 2023-24 based on their work, supported by Sustainable Inclusive Excellence funds. In Summer 2023, the Morgan Center will launch the first cohort of Morgan Pedagogy Champions using a similar peer learning model as was used for online teaching during the pandemic. This model was successful at engaging a greater number of faculty at scale from within educators' disciplinary homes. The Morgan Pedagogy Champions will be stipended positions funded through the Morgan endowment.

2019: Food For Thought Seminar
"Crafting Inclusive Spaces
for Gender Diverse Students"

2019: Food For Thought Seminar
"Culturally Responsive
Teaching Practices"

2021-22: Teaching Innovation Grant
for "Creating Pathways for
a Gender-Inclusive Curriculum at WPI"

Nov 2021: Food For Thought
"Inclusive Syllabi"
2021-22: New micro-course
on Inclusive Syllabi

2021-ongoing: Action Research
Local data collection
Publishing
Department workshops

Summer 2023 and AY 2023-24:
Morgan Pedagogy Champions –
Revealing the Hidden Curriculum
15 faculty across departments

WHAT'S NEXT FOR THE CENTER

With a new president of WPI, incoming classes whose high school years were largely in social isolation, and a pressing need for social justice action, there are also major changes ahead for the Morgan Teaching and Learning Center. At the end of the 2023-24 academic year, our director of 17 years will begin a well-earned retirement. With a new Operations Manager, Mary Courtemanche, joining the center in March 2023, we hope to have a strong transition plan in place with plenty of support.

We remain committed to championing diversity, equity, inclusion, and belonging (DEIB) across existing programs and services, aligned with our own values and WPI's strategic plan. New offerings that respond to the systemic nature of racism, sexism, classism, and other inequities are in development. We are collaborating with Talent & Inclusion and faculty in the Gender, Sexuality and Women's Studies Program to engage departments in reflection and implementation of inclusive pedagogy during the 2023-24 academic year. One portion of that effort is to recruit a cohort of departmental Morgan Pedagogy Champions to scale efforts that tackle the hidden curriculum and inclusive pedagogy in a faculty-driven way centered within departments. The model is similar to the "Faculty Online Champions" that we utilized to support the transition to online and hybrid teaching. We believe this model holds long-term promise for extending the reach of the Center's work and creating a structure for diffusing effective and innovative practices within and across departments while, at the same time, building community.

We are excited to be entering our second year offering the Faculty On-Ramp to Teaching (FORT) at WPI, a micro-course for new faculty. Facilitated by Senior Instructional Designer Caitlin Keller, the micro-course goes well beyond the historically offered half-day workshop during New Faculty Orientation. New faculty teaching fall courses now have the opportunity to begin preparing their first course more gradually and with support during the summer months. We learned a lot in the first year and will be trying some new strategies to enable more faculty to participate. Our long-term goal is for all new faculty to have foundational pedagogical training and to connect them immediately with staff experts who can help.

And last, the Morgan Center will become the institutional home for signature programming and resources for the professional growth of associate-rank faculty across all tracks. As in most institutions, associate professors at WPI historically have been "left on their own," a condition that results in gender and racial inequalities in promotion to full professor. With the support of an ADVANCE grant from the National Science Foundation, Director Chrys Demetry and colleagues developed a workshop and accompanying resources to engage early Associate Professors in creating a values-based and passion-based mid-career professional development plan. Associate Professors and their mentors also have new resources to make sense of how one can demonstrate quality and impact for the multiple forms of scholarship recognized in WPI's promotion policy. Senior Research and Evaluation Associate Kimberly LeChasseur is also part of the team co-developing a local women's leadership development program for the university.

We look forward to continuing to generate new ways of advancing teaching and learning at WPI for all our faculty, staff, and students in educator roles in the years ahead.

Morgan Teaching and Learning Center

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