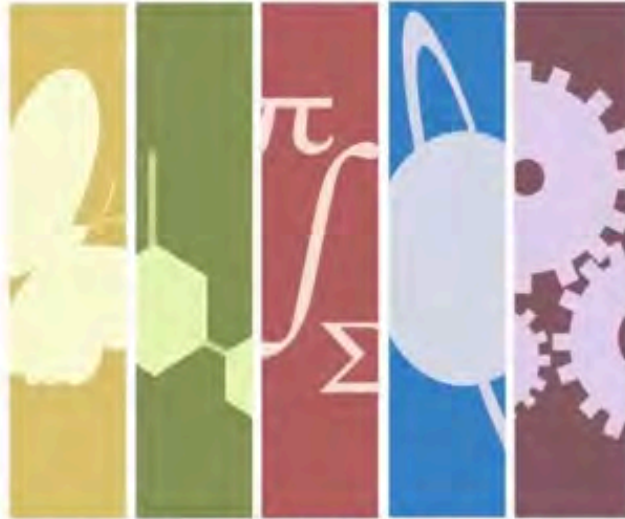WHAT IS

CIRTL

?

University *of* Idaho
College of Graduate Studies

University *of* Idaho
Center for Excellence
in Teaching and Learning

CIRTL IS…

The Center for the Integration of Research, Teaching, and Learning.

CIRTL seeks to enhance excellence in STEM undergraduate education through development of a national faculty committed to implementing and advancing evidence-based teaching practices for diverse learners.

CIRTL was founded in 2003 as a National Science Foundation Center for Learning and Teaching in higher education.

CIRTL uses graduate education as the leverage point to develop a national STEM faculty committed to implementing and advancing effective teaching practices for diverse student audiences as part of successful professional careers.

The goal of CIRTL is to improve the STEM learning of all students at every college and university, and thereby to increase the diversity in STEM fields and the STEM literacy of the nation.

CIRTL is a Network...

"To prepare the future STEM faculty, CIRTL must influence graduate-through-faculty preparation in teaching and learning at a significant number of research universities. We plan to achieve this goal through CIRTL's core ideas--that is, through a learning community of diverse research universities mutually engaged in the deliberate, systematic, and reflective use of research methods to develop and implement teaching practices that advance STEM learning."

With A Mission…

The CIRTL mission is to enhance excellence in undergraduate education through the development of a national faculty committed to implementing and advancing effective teaching practices for diverse learners as part of successful and varied professional careers.
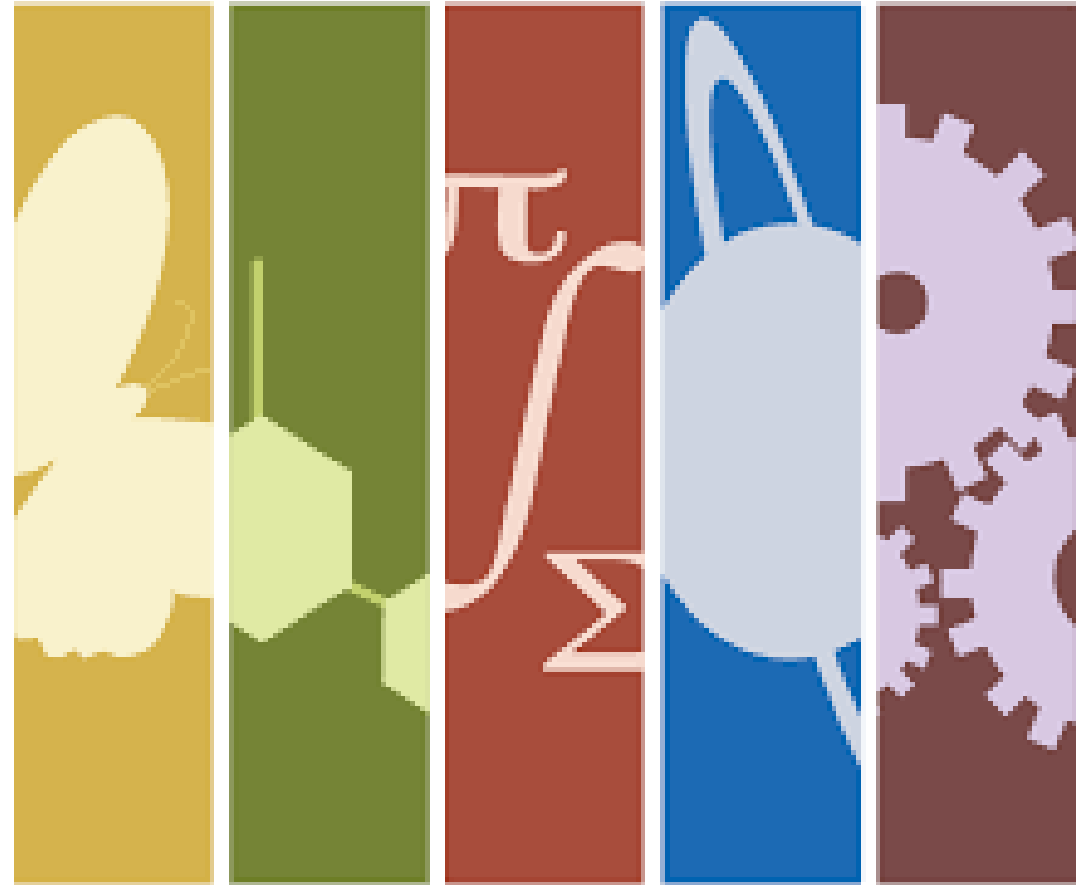
Values...

Learner-Centered Education: Learning is shaped by the needs, identities, experiences, communities, and goals of our learners. We develop educators who place learners at the center of their work.

Equity and Inclusion: In equitable and open environments, everyone is respected, valued, and encouraged, so that they are able to contribute to their fullest potential. We work to develop and sustain inclusive working spaces and learning communities that achieve equitable outcomes.

Diversity and Representation: Diversity of people brings forth diversity of ideas and learning. We cultivate and engage participation as a network, including leadership, that is representative of the demographics and lived experiences of the broader population.

Collaboration: Working together allows us to better achieve our co-created goals. We engage constituencies at all levels within and across institutions as colleagues in our work.

Intellectual Generosity: Mutual openness to ideas of each other advances understanding and discovery of knowledge. Acknowledging that there are multiple ways of knowing, we respectfully listen and share our ideas, perspectives, practices, and expertise.

C I R T L

Inclusive Excellence and Innovation: Critical examination of data, scholarly reflection, and collective review are our standards of excellence. We innovate for mutual improvement of inclusive educational practices.

Reflective Decision-Making: Reflective decision-making is responsive to the evolving landscape of the CIRTL Network. We gather, share and analyze evidence to make data-informed decisions to collectively guide the CIRTL Network.

And Core Ideas…

Learning-through-Diversity

- Learning-through-diversity capitalizes on the rich array of experiences, backgrounds, and skills among STEM undergraduates and graduates-through-faculty to enhance the learning of all. It recognizes that excellence and diversity are necessarily intertwined

Teaching-as-Research

- Teaching-as-research is the deliberate, systematic, and reflective use of research methods by science, technology, engineering, and mathematics (STEM) instructors to develop and implement teaching practices that advance the learning experiences and outcomes of both students and teachers

Learning Communities

- Learning communities bring together groups of people for shared learning, discovery, and generation of knowledge. To achieve common learning goals, a learning community nurtures functional relationship among its members.

Developed By and Leveraged Through Cross-Network Programming

CIRTL offers a range of online programming to the cross-Network learning community...This cross-Network programming comes in addition to what our member institutions offer locally for their own students. Read more about our offerings below:

- Courses
- Workshops
- CIRTLCast series
- Massive Open Online Courses (MOOCs)
- TAR capstone series
- Journal club
- Summer institutes
- Online learning communities
- Network Exchange Program

Spatially and Institutionally, We Are...
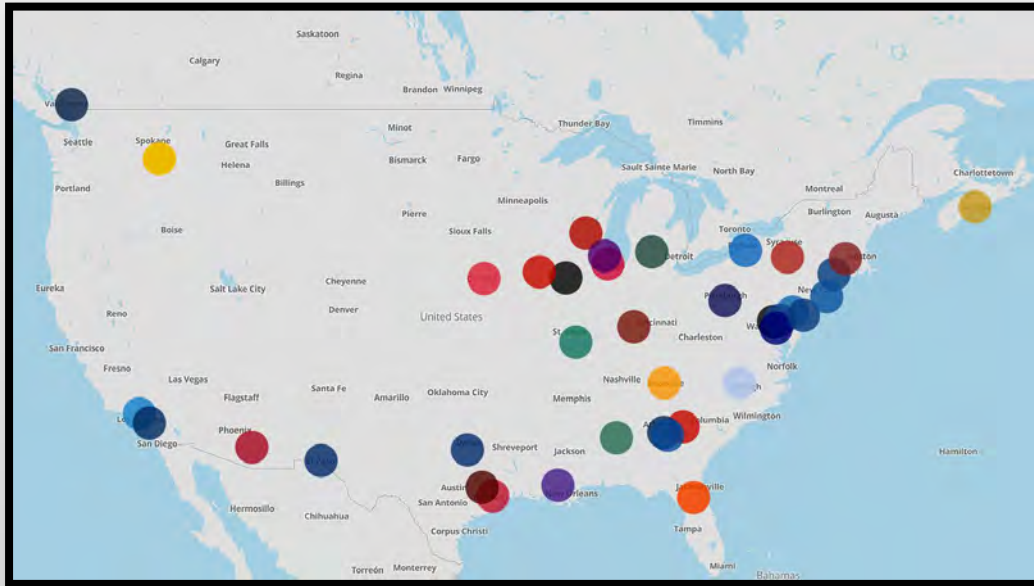
Cornell University	Northwestern University	University of Idaho
Columbia University	Texas A&M University	University of Illinois
Dalhousie University	University at Buffalo-State University of NY	University of Iowa
Drexel University	University of Alabama at Birmingham	University of Maryland-BC
Emory University	University of Arizona	University of Massachusetts-Amherst
Georgia Institute of Technology	University of British Columbia	University of Nebraska
Howard University	University of California Irvine	University of North Carolina-Chapel Hill
Indiana University	University of California Los Angeles	University of Pittsburgh
Iowa State University	University of Delaware	University of Tennessee
Johns Hopkins University	University of Florida	University of Texas-Arlington
Louisiana State University	University of Georgia	University of Texas-El Paso
Michigan State University	University of Houston	University of Wisconsin
		Washington University St. Louis
		Yale University

A Dynamic Network that Attracts, Supports, and Enhances the Success of University of Idaho Graduate Students, Post Docs, and Undergraduates while Simultaneously Improving Access to and Learning in STEM Disciplines

As part of the CIRTL Network, University of Idaho graduate students and post docs achieve a differentiating experience that not only provides a competitive advantage in the job market, but positions them as powerful agents of change in STEM education on and beyond our campus.

It enters our students and post docs into a community of future faculty and scientists who learn from the combined wisdom and experience of leading research institutions and scholars, of which we are one.

In short, CIRTL helps prepare tomorrow's leaders today.

Examples of Themes Advanced by the Network:

Preparing Future Faculty as Change Leaders Toward Inclusive STEM Higher Education

Preparing the Future STEM Faculty for the Rapidly Changing Landscape of Higher Education

Addressing the Student Learning Experience: Achieving Diversity in STEM Disciplines

And CIRTL advances success through core tiered Learning Outcomes for ALL CIRTL-affiliated graduate students and post docs . This is realized through a combination of CIRTL-sponsored and institutionally-designed programs as follows:

CIRTL Learning Outcomes

Associate – Describe and Recognize Value

Process

Teaching-as-Research

- Describe how to access the literature and existing knowledge about teaching and learning issues, in a discipline or more broadly.
- Define and recognize the value of the Teaching-as-Research process, and how it can be used for ongoing enhancement of learning.
- Describe a "full-inquiry" cycle.
- Describe how the integration of Evidence-Based Teaching, Learning Communities and Learning-through-Diversity within Teaching-as-Research can be integrated to implement and advance effective teaching practices for diverse learners.

Content

Evidence-Based Teaching

- Describe and recognize the value of realistic well-defined, achievable, measurable and student-centered learning goals.
- Describe several known high-impact, evidence-based effective instructional practices and materials and recognize their alignment with particular types of learning goals.
- Describe several assessment techniques and recognize their alignment with particular types of learning goals.

Learning Communities

- Describe and recognize the value of learning communities, and how they impact student learning.
- Describe several techniques for creating a LC within a learning environment, including strategies that promote positive interdependence between learners so as to accomplish learning goals.
- Describe several techniques and issues of establishing LCs comprising a diverse group of learners.
- Recognize the value of and participate in local professionally-focused learning communities associated with teaching and learning.

Learning through Diversity

- Describe the scope of diversity in learning environments, of both students and instructor.[1]
- Describe the impact of diversity on student learning, in particular how diversity can enhance learning, and how inequities can negatively impact learning if not addressed.
- Describe how an instructor's beliefs and biases can influence student learning.
- Describe and recognize the value of drawing on diversity in the development of teaching plans (including content, teaching practices and assessments) to foster learning.
- Describe several learning-through-diversity (LtD) techniques and strategies.

[1] Including but not limited to backgrounds, race, gender, ability, socioeconomic status, ethnicity, gender preference, and cognitive skills.

Practitioner - Engage

Teaching-as-Research

- Develop and execute a Teaching-as-Research plan for a limited teaching and learning project
  - Find and critically consider the literature and existing knowledge associated with the teaching and learning project[2].
  - Create realistic well-defined, achievable, measurable and student-centered learning goals for the teaching and learning project.
  - Find or develop assessment (measurement) tool(s) that are aligned with the learning goals of the teaching and learning project.
  - Develop a teaching plan (a hypothesis) to accomplish learning goals.
  - Implement the teaching plan and collect some data regarding achievement of learning goals.
  - Analyze the data and draw evidence-based conclusions about the impact on student learning.
  - Complete a full-inquiry cycle for the teaching and learning project by using findings to suggest improvements to the above actions
- Show the integration of Evidence-Based Teaching, Learning Communities and Learning-through-Diversity to accomplish learning goals.

Process

Practitioners engage with all outcomes in one area and some learning outcomes in all areas below.
Often this is accomplished in the course of doing their TAR project.

Content

Evidence-Based Teaching	Learning Communities	Learning through Diversity
- Access the literature and existing knowledge to develop a deeper understanding of existing evidence-based knowledge concerning high-impact, evidence-based teaching practices.	- Access the literature and existing knowledge to develop a deeper understanding of the knowledge concerning LCs and their impact on student learning.	- Access the literature and existing knowledge to develop a deeper understanding of diversity and its impact on accomplishing learning goals.
- Integrate one or more evidence-based teaching strategies into a teaching plan so as to accomplish learning goals.	- Integrate one or more LC strategies into a teaching plan so as to accomplish learning goals and learning-through-diversity.	- Examine and describe own beliefs and biases, including how they may influence their students' learning.
- Implement one or more evidence-based teaching strategies for students in a learning experience.	- Implement one or more LC strategies for students in a learning experience.	- Determine the diverse backgrounds among a group of students, and consider the opportunities and challenges of the findings on each student's learning.
	- Contribute to local professionally-focused learning communities associated with teaching and learning.	- Create a teaching plan that incorporates content and teaching practices responsive to the students' backgrounds.
		- Integrate one or more LtD techniques and strategies in a teaching plan so as to use students' diversity to enhance the learning of all.
		- Implement one or more LtD strategies in a teaching experience.

[2] Often this will be a first TAR effort, and need not be extensive or intended for public presentation. Optimally the project will be a coherent, complete experience of the full-inquiry cycle, but opportunities and situations vary from campus-to-campus and student-to-student.

Scholar – Advance and Disseminate

- CIRTL Scholars have added to community knowledge about teaching and learning.

- They have designed and implemented a Teaching-as-Research investigation, and defended the findings to CIRTL learning-community peers.

- The significance of CIRTL Scholar Teaching-as-Research work is established through presentation and/or publication of the findings to all-university, regional, national, or international audiences.

CIRTL at the University of Idaho

A Joint Venture Between the College of Graduate Studies and the Center for Excellence in Teaching and Learning, Jerry McMurtry and Brian Smentkowski, Institutional/Administrative Co-Leaders…in search of a Faculty Leader

UI CIRTL Outcomes (in development)

1

Associate Level: Understanding and implementing evidence-based pedagogy.

- Participate in 5+ pedagogy PFF/CIRTL workshops
- Understand the foundations of evidence-based teaching and learning; integrated research, teaching, and learning; Teaching as Research; and Learning Through Diversity
- 1:1 Teaching and Learning mentorship

2

Practitioner Level: Engage in Teaching As Research

- Participate in a TAR Cohort
- Create a TAR Proposal
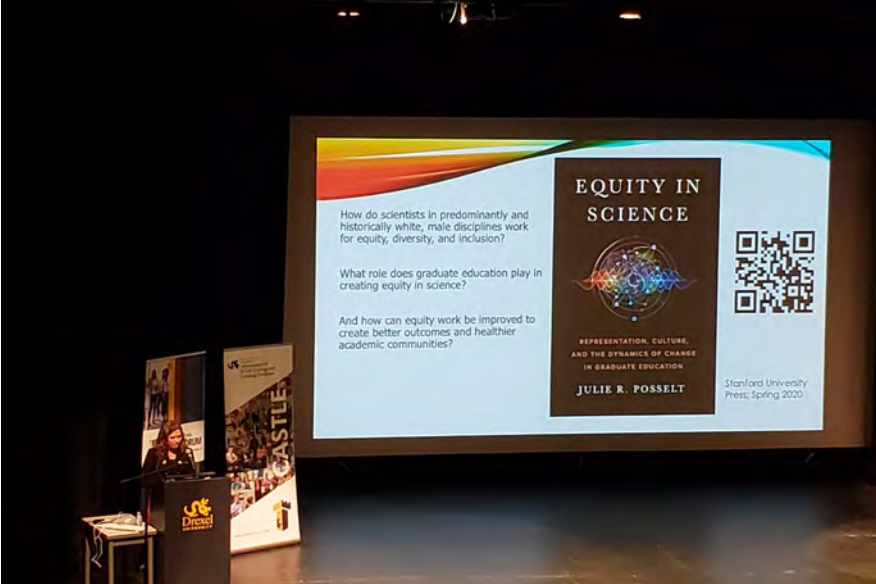- Implement a TAR Project and submit an experiential reflection

3

Scholar Level: Share Your Research

- Transform your project into a manuscript
- Present or publish your project

Preparing Future Faculty (PFF): Programming & Credentialing

Teaching and Learning	The Professoriate & Professions	Approaching the Market	Special (CIRTL) Topics
CIRTL Foundations: Evidence-Based Teaching and Learning Through Diversity (LTD)	Understanding and Navigating the Changing Terrain of Higher Education	Identifying and Pursuing Your Options	CIRTL-Based Programming
Linking How Learning Works to Creating Significant Learning Experiences	Understanding Different Institutional Types and Context: External Mentor Session	Developing Your Dossier	TAR Basics: Teaching as Research. Linked to CIRTL Associate Level
Universal Design for Learning and Ways of Knowing (LTD)	Working Relationships: Collegiality, Egos, and Even Imposter Syndrome	Writing to Your Audience: External Mentor Session	TAR Projects: Participating in a Teaching As Research Project/Community. Practitioner Level
Inclusion by Design, Part 1: Designing a Successful Class and Syllabus (LTD)	Teaching, Scholarship, and Service: The Three Legs of the Stool	Developing and Refining an Authentic DEI Statement (LTD)	TAR Scholarship: Sharing Your Teaching As Research. Scholar Level
Inclusion by Design, Part 2: Inclusive Online Course Design and Practices (LTD)	Balance, Boundaries, and Well-Being: Different Definitions of Success	Developing and Refining Your Teaching Philosophy	Cross-Network Participation DEI Programming in STEM and Related Fields
Exploring Teaching Strategies that Work for You	Designing Your Productivity Pathway	Preparing For Interviews	
Engaging Students with Technology	Mentoring: What to Look For/What to Expect	Interview Simulations	
Accessibility In Instructional Modalities (LTD)	DEI for Everyday Practice (LTD)	Teaching Observations	
Using your LMS Successfully	Roads Less Traveled? Career Options		
TILT, SLOs, and Assessment: The Vocabulary and Evidence of Learning			
Fostering Critical Thinking, Critical Reflection, Metacognition, and Self Regulated Learning			
Motivating and Engaging Students			LTD = Learning Through Diversity. This includes pedagogy workshops, CIRTL programming, and personal/professional development including but not limited to Green Dot training
High Impact Practices and Pedagogies			
Handling Hot Topics and Difficulty Dialogues			

Enhancing the Value Proposition

- While the primary audience includes graduate students and post docs...
  - It is the give-back to undergraduate education through their service as scholars and teachers that makes a difference on and beyond our campus;
  - It is the network of a national –indeed, international– faculty and graduate student and post doctoral population that enriches the educational and professional experiences of all through collaboration;
  - It is the active engagement of our faculty that elevates their profiles, fosters new collaborations, and provides exciting new opportunities to attract, educate, and place graduate students and post docs;
  - It is the replenishing effect of engagement that extends beyond STEM disciplines; and
  - It is a life-long and robust population of CIRTL alumni that reinforces the value of integrated research, teaching, and learning AND graduate and undergraduate education.

Call To Action: Next Steps

Identifying Faculty Leadership

Building CIRTL Programming

Communicating to faculty and graduate students/post-docs

Sharing with the network