



LEARNING ACTIVELY MENTORING PROGRAM (LAMP) STRATEGIC PLAN

GOAL 1: ENABLE ALL NEW AND MOST EXISTING STEM TEACHING FACULTY AND TEACHING ASSISTANTS TO BECOME TRAINED IN BEST PRACTICES AND ACTIVE LEARNING STRATEGIES BY 2022 BY PROVIDING TIME AND SUPPORT, ADEQUATE TEACHING SPACES, MENTORING, AND ACCESS TO AND INTERPRETATION OF TEACHING AND LEARNING BEST PRACTICES AND INNOVATIONS.

SPECIFIC OUTCOMES:

1. The yearlong LAMP Fellows program will train new and existing faculty in the five core UW Science Initiative departments: Chemistry, Botany, Zoology & Physiology, Molecular Biology, and Physics & Astronomy departments. (For current status in accomplishing this and all outcomes, see Appendix Table 1)
2. The yearlong LAMP Fellows program will train at least one faculty member from every STEM-related department and interdisciplinary (STEM-integrated) department in every one of the 9 colleges (Table 2 Appendix)
3. The yearlong LAMP Fellows program along with the spring graduate student training program will train 75 graduate students in STEM and STEM-related disciplines by the year 2022.
4. By the year 2022, the yearlong LAMP Fellows Program will have trained at least two STEM educators from every one of the State's 7 community colleges.
5. By the year 2022, the LAMP Scholars Learning Assistant Program will be providing a hands-on teaching experience in an active learning classroom and a 1-credit pedagogy course to at least 50%¹ of the *students earning a post-bacc* from the College of Education.
6. By the year 2022, the LAMP Scholars Learning Assistant Program will have provided a hands-on teaching experience in an active learning classroom and a 1-credit pedagogy course to 50 *undergraduate students*.
7. By the year 2022, LAMP-trained educators will have instructed over 20,000 students.
8. By the year 2022, at least 3 additional active learning classrooms and one large-scale active learning classroom will be available and preferentially assigned to LAMP-trained educators.

GOAL 2: IMPROVE STUDENT RETENTION, SUCCESS, AND ENGAGEMENT IN STEM CLASSROOMS.

SPECIFIC OUTCOMES:

1. Analyze D, W & F rates for classes taught by instructors pre- and post-LAMP training. Determine changes in student success as measured by changes in the number of students earning a D or F. Determine changes in retention as measured by rates of withdrawal.
2. Analyze teaching evaluations for classes taught by instructors pre- and post-LAMP training. Determine changes in student engagement as measured quantitatively by student ratings and qualitatively by coding student comments.

¹ In 2018, twelve post-bacc students were admitted into the College of Education Program. If numbers remain equivalent, 50% would translate to 6 LAMP Post-bacc LAMP learning assistants.

GOAL 3: CONDUCT RESEARCH ON ACTIVE LEARNING IN ALL CLASSROOMS, WITH AN EMPHASIS ON WHAT IS WORKING IN ACTIVE LEARNING CLASSROOMS, TO INVESTIGATE RELATIONSHIPS BETWEEN TEACHING PRACTICES AND STUDENT SUCCESS, LITERACY, ENGAGEMENT, AND FEELINGS OF INCLUSION.

SPECIFIC OUTCOMES:

1. Involve at least 20% of all LAMP-trained educators in the Scholarship of Teaching and Learning (SoTL) Faculty Learning Community (in collaboration with the Ellbogen Center for Teaching and Learning) by 2022.
2. Present at least 20 LAMP SoTL projects at teaching and learning conferences by 2022.
3. Publish at least 4 LAMP SoTL manuscripts in peer-reviewed educational journals by 2022.
4. Involve at least 10% of all LAMP-trained educators in the Open Educational Resources (OER) statewide initiative by 2022.

GOAL 4: ESTABLISH PROFESSIONAL DEVELOPMENT/COLLABORATION OPPORTUNITIES FOR SCIENCE INSTRUCTORS ACROSS THE STATE WITH THE GOAL OF IMPACTING K-16 WYOMING STUDENTS AS THEY TRANSITION THROUGH EDUCATIONAL LEVELS.

SPECIFIC OUTCOMES:

1. LAMP will have supported 50 K-16 educators to attend the Wyoming Department of Education Roadmap to STEAM Conference by 2022.
2. By 2022, half of the educators supported by LAMP to attend the Wyoming Department of Education Roadmap to STEAM Conference will present at the conference with presentations that show successful implementation of active learning.
3. The LAMP/WRSP Roadshow will travel to schools in every county of the State by 2022.
4. By 2022, the LAMP/WRSP Roadshow will impact more than 5,000 students.
5. By 2022, the LAMP/WRSP Roadshow will allow Outreach opportunities for more than 20 undergraduate and graduate LAMP and WRSP students.

GOAL 5: CONDUCT RESEARCH ON THE IMPACTS OF LAMP TRAINING ON EDUCATORS' CAMPUS AND STATEWIDE SOCIAL CONNECTEDNESS.

SPECIFIC OUTCOME:

1. Complete a full social network analysis by 2022.

LAMP Strategic Plan Appendix Table 1: Current Status in accomplishing Goals

Goal#/Specific outcome#	Current Status
G1/SO1	LAMP has trained 6 of the 19 faculty members in Chemistry, 5 of the 20 faculty in Botany, 2 of the 17 faculty in Physics and Astronomy, 2 of the current 29 faculty in Zoology & Physiology (1 who left the department) and none of the faculty in Molecular Biology.
G1/SO2	LAMP has trained at least one faculty member from each of the departments in Table 2 that are written in blue, italicized font.
G1/SO3	LAMP has trained 26 graduate students in STEM and STEM-related disciplines.
G1/SO4	LAMP has trained 2 faculty from Eastern Wyoming College (EWC), 6 faculty from Laramie County Community College (LCCC), 4 faculty from Northwest College (NWC), and 1 faculty member from Sheridan College. Thus, LAMP has trained faculty from 4 of the 7 community colleges.
G1/SO5	In 2017 and 2018, 5 College of Education Post-Bacc students served as LAMP Scholar Learning Assistants (LA). Two of these 5 students have completed their student teaching practicum and both have provided annotated lesson plans and/or reflections on how the LAMP LA experience affected their practicum. One student stated, "The training and exposure to active learning I received as a learning assistant influenced my teaching style greatly, in a number of different ways... We had an activity concerning percent composition that involved using chalk to write on the sidewalk outside, and another activity on the same topic that used bubble gum and the percent sugar that could be calculated as lost when the gum was chewed."
G1/SO6	To date, the LAMP Scholars Learning Assistant Program has provided a hands-on teaching experience in an active learning classroom and a 1-credit pedagogy course to 18 undergraduate students (5 in F17, 6 in S18 and 7 in F18). *Note, post-baccs (G1/SO5) are not considered undergraduate students.
G1/SO7	We are currently data mining and compiling these numbers
G1/SO8	The new SI building will provide 1, 204 person active learning classroom. Construction is expected to commence in 2019. In September 2018, the Facilities Council approved the classroom upgrade of 3 physical sciences classrooms (237, 237A and 239) to become an active learning classroom. IT monies have not yet been identified.
G2/SO1	In October 2018 the D, W & F rates were requested from Institutional analysis. Sue Koller related that it would be possible to pull these data.
G2/SO2	In October 2018, permission was granted to gain access to College of Arts and Sciences evaluations for LAMP-trained educators pre- and post-LAMP training.
G3/SO1	Currently 17 LAMP-trained educators are a part of the scholarship of teaching and learning (SoTL) faculty learning community. We have trained a total of 71 (25 in 2016-2017, 24 in 2017-2018 and 22 in 2016-2017) faculty so this is 24% of our participants. We are currently exceeding our goal but hope to maintain these levels of active participation.
G3/SO2	We are currently developing an instrument to get more complete data.
G3/SO3	We are currently developing an instrument to get more complete data.
G3/SO4	We launched this initiative in fall 18
G4/SO1	In 2017, LAMP awarded scholarships to 18 K-16 educators from Rock Springs, Lander, Casper, Thermopolis, Cody, Torrington, Upton and Cheyenne to attend the Wyoming Department of Education Roadmap to STEAM Conference. In 2018, 8 scholarships were awarded to educators from Rock Springs, Laramie, Riverton, Moorcroft and Gillette.
G4/SO2	In 2018, only 4 of the 18 2017 scholarship winners returned to present at the 2018 conference. These presenters were competent in all outcomes. However, the low numbers made us more aware of constraints that K-12 educators face. Nonetheless, we hope to do better next year.
G4/SO3	In 2017-2018, we traveled to schools in Laramie, Sheridan, Gillette, Torrington, Wamsutter, Rock Springs and Casper. This encompasses 5 counties: Natrona, Campbell, Sheridan, Sweetwater and Niobrara county.
G4/SO4	During the 2017-2018 academic year, the Roadshow impacted ~1100 students.
G4/SO5	During the 2017-2018 academic year, 11 undergraduate and graduate students were afforded outreach opportunities as part of the LAMP/WRSP Roadshow.
G5/SO1	A Social Network Analysis survey has been drafted; we are in the process of writing an IRB and making our background knowledge more robust. We aim to launch the survey by January 2019.

LAMP Strategic Plan Appendix Table 2: Non-SI Core Departments from which LAMP will train faculty

College of Agriculture	
	<i>Agricultural & Applied Economics</i>
	Animal Science
	Ecosystem Science & Management
	Family & Consumer Sciences
	<i>Microbiology</i>
	Plant Sciences
	<i>Veterinary Sciences</i>
College of Arts and Sciences	
	Anthropology
	<i>Ecology Program</i>
	<i>Geography</i>
	<i>Geology & Geophysics</i>
	<i>Mathematics and Statistics</i>
	Psychology
	School of Culture, Gender & Social Justice
	<i>Life Sciences Program</i>
College of Business	
	Accounting and finance
	Economics
	Management and Marketing
College of Education	
	<i>Instructional Technology</i>
	Secondary Education
	Science and Mathematics Teaching Center
College of Engineering and Applied Sciences	
	Atmospheric Science
	Chemical Engineering
	Civil & Architectural Engineering (Environmental)
	Civil Engineering/Water Resources
	Computer Science
	<i>Electrical & Computer Engineering</i>
	Mechanical Engineering
	Petroleum Engineering
College of Health Sciences	
	Kinesiology & Health
	Medical Laboratory Science Program
	Disability Studies
	Nursing
	Pharmacy
	WWAMI Medical Education Program
College of Law	
	JD & MA in Environment and Natural Resource
Haub School of Environment and Natural Resources	
	<i>Environmental Systems Science</i>
	Environment and Natural Resources
School of Energy Resources	
	Energy Resource Management and Development