

Centralizing ULA Administration, Support, and Additional Positions

Strategic Plan Theme: Student Success

Funding Level: Below \$1 million

Facility Needs: No new facilities will be needed

Submitting Unit: APUE

Collaborating colleges/departments/units involved with this proposal.

The Center for Teaching and Learning Innovation, Associate Provost for Undergraduate Education, and academic units

What is the proposal's big theme or idea?

The strategic utilization of Undergraduate Learning Assistants (ULAs) as part of teaching teams enables implementation of student-centered, evidence-based instructional approaches that enhance student learning and success. ULAs can contribute to the creation of more inclusive learning environments and provide growth opportunities for a diverse group of learners. Positive impacts on both ULAs themselves and students in ULA-supported courses have been widely reported in the education literature. The outcomes are consistent with MSU's goals to create inclusive learning environments, improve student learning and success, and expand opportunities for students from groups that have been historically underserved or excluded from higher education. Accordingly, ULAs have been incorporated as members of teaching teams for a variety of courses in disciplines and colleges across MSU. However, the existing ad-hoc strategy for supporting ULAs is not centralized at college or university levels. Previous conversations have highlighted obstacles and opportunities in four main areas: (1) recruitment and hiring, (2) training and development, (3) community and culture, and (4) evaluation and assessment. We therefore propose to centralize key aspects of a ULA program and strengthen existing efforts by reducing redundancies and creating efficiencies of scale while also providing a lever for expanding the use of ULAs across courses and units. The proposed program, ULA@State, will expand and enhance efforts to improve the overall learning experience for students in ULA-supported classes and create professional development opportunities for the students who serve as ULAs as well as faculty and academic staff. At the foundation of ULA@State is a culture that values inclusion, collaboration, growth, and mentorship, resulting in a program that is synergistically beneficial to all involved.

The text and ideas for this proposal come from the ULA@State white paper. You can find the entire text along with the names of the committee members who generated the paper here: <https://drive.google.com/file/d/1W1i7MVhPPCGwq8YedoZ--YLMRjTrMBbO/view?usp=sharing>

What is the proposal's goal?

To create a philosophical shift on campus to include ULAs as part of instructional teams to improve holistic student experience in learning by * Supporting a community of educators who will work together to improve student learning and success by embracing the values of diversity, equity, and inclusion in instructional practices. * Promoting course transformation across campus through the expanded use of ULAs as key members of teaching teams. Providing funds for 300 new ULA positions that would be available for faculty across campus, providing additional opportunities for students from historically underrepresented populations to develop professional identities and become part of a community of practice. * Supporting undergraduate students' learning and success by facilitating the implementation of inclusive, learner-centered classrooms characterized by active and collaborative learning.

Define the significance, or impact of your big idea.

Centralizing ULA administration, support, and creating 300 new ULA positions will improve the equity of ULA positions, provide a system for smaller units to explore using ULAs, allow for standardized training and credentialing, and reduce redundant systems across campus. With the increase of positions, MSU will have over 1,500 students engaged in peer learning and all of the attending benefits. As ULAs will be implemented in large scale courses, it is conceivable that this improvement will touch every student's MSU experience, with demonstrated impacts including decreased DFW rates and increased student retention and engagement for both ULAs and the students they engage with. For faculty, having support in the classroom will allow them to implement a wider range of pedagogical interventions and innovations, conceivably improving faculty engagement. This increase in teaching assistance is especially important given the increased demand for accommodations and flexibility in modality that students are now starting to request.

Undergraduate peer educators with a variety of roles have been widely used across disciplines to support student learning. Our proposed model is based off of work at the University of Colorado-Boulder (Otero, 2015). This model was touted as a cost-effective way to promote evidence-based teaching practices, particularly in large enrollment, introductory level STEM courses. In this model undergraduate students with "guidance of weekly preparation sessions and pedagogy course, facilitate discussions among groups of students in a variety of classroom settings that encourage active engagement (Learning Assistant Alliance). Incorporation of ULAs based on this approach facilitates transformation of traditional courses to active and collaborative classroom environments.

Research on the LA Model and similar programs showed improvements in learning and success for students who participated in ULA-supported classes. Gains in student learning as measured by concept inventories have been observed in physics (Otero et al, 2006; Otero et al., 2010; Goertzen et al., 2011;), biology (Talbot et al, 2015), and chemistry (Langdon case study). Incorporation of ULAs led to improved performance on higher-order cognitive skills assessments in the biological sciences (Sellami et al., 2018). These improvements were associated with the creation of classroom environments that included instructional practices known to improve learning. For example, classroom activities guided by ULAs resulted in increased time spent on discussion and question-asking by students (Knight et al., 2014). Students in ULA supported classes reported higher levels of satisfaction with the learning environment (Talbot et al, 2015). Importantly, exposure to ULAs is linked to significant decreases in failure in introductory STEM courses and increased likelihood of graduation within 6 years (Alzen et al., 2018).

Who will be impacted?

Most undergraduate students will be impacted as well as faculty and staff teaching large-enrollment courses. Serving as a ULA can have profound impacts on students' identities and professional development. Physics ULAs, the most well-studied group, developed integrated physics identities as members of a community of practice, factors associated with persistence and success (Close et al., 2016). Overall attitudes were more positive and personal interest in physics was dramatically higher for students who held ULA positions compared to those who did not (Otero et al., 2010). ULA programs helped recruit students to teacher education programs (Otero et al., 2010) and former ULAs are more likely to use evidence-based teaching practices than their counterparts who did not have similar experiences as measured by the Reformed Teaching Observation Protocol (RTOP) (Gray et al., 2016). Research completed on physics ULAs who participated in the P-Cubed classroom at MSU highlighted the positive impact the ULA experience has had on students' communication and group work practices after entering the workforce (Hamerski et al., 2018). In addition to these research studies, conversations with previous ULAs from the Department of Computational Mathematics, Science, and Engineering have suggested that their roles as ULAs are an invaluable experience to draw on when interviewing for jobs. One recent graduate stated that their ULA experience was the primary reason for their eventual job offer.

In addition to the positive impacts on students, ULA programs provide an effective lever to promote and facilitate institutional change through the adoption of evidence-based teaching practices. Alzen et al. (2018) describe the model as follows.

The LA model is not itself a research-based instructional strategy. Instead, it is a model of social and

structural organization that induces and supports the adoption of existing (or creation of new) research-based instructional strategies that require increased teacher-student ratio. The LA program is at its core, a faculty development program. However, it does not push specific reforms or try to change faculty directly. Instead, the opt-in program offers resources and structures that lead to changes in values and practices among faculty, departments, students, and the institution. ULA programs provide a mechanism for institutionalization of course transformation through the addition of infrastructure and support (Goertzen et al., 2011). Institutional investments in ULA programs drive interest and expansion of the program into new disciplines and departments.

What does sustainability for your proposal look like?

The project will require continual annual investment. The director and assistant director lead programmatic evaluation and iterative improvement.