

Focus on Student Success: Expanding the Learning Assistant (LA) Model across the Curriculum to Transform Teaching through Student-Centered Collaborative Learning

Authors: Dr. Brittanney Adelman; Dr. Jennifer Bebergal

With Initial Supporting Faculty*:

Department/College	Name	Title
Mathematical Sciences	Stephen Locke	Professor and Interim Chair
	Lee Klingler	Professor and former Chair
	Jason Mireles-James	Associate Professor
	Erik Lundberg	Associate Professor
	Necibe Tuncer	Associate Professor
	Zvi Rosen	Assistant Professor
	Kasia Winkowska-Nowak	Instructor
Chemistry & Biochemistry	Pedrag Cudic	Professor and Chair
	Dan Hutchital	Professor
	Mare Cudic	Associate Professor (Director, Honors in Chemistry)
	Tito Sempertegui	Senior Instructor
	Maciej Stawikowski	Assistant Scientist
Biological Sciences	Sarah Milton	Professor and Chair
	Marianne Porter	Assistant Professor
	Matthew Lovelace	Visiting Instructor
Exercise Science and Health Promotion	Michelle Papania	Instructor
Business - Information Technology & Operations Management	Jonathan Sweet	Instructor
Engineering & Computer Science	Nancy Romance	STEM Education & Learning Sciences (Director FAU STEM Collaborative)

**It is anticipated that additional faculty and departmental support is forthcoming.*

The Learning Assistant Program is already having a definitive impact on student learning, satisfaction, success, and retention in Calculus and Chemistry at Florida Atlantic University. We propose to extend this successful, evidence-based program in classrooms spanning general education, gateway, and discipline-specific courses across the curriculum.

What is the Learning Assistant (LA) program?

The LA Program is a model supporting faculty, students, and Learning Assistants (LAs). Faculty are supported in the transformation of courses to embed trained LAs who facilitate student-centered, active learning and collaborative group work for all students in the classroom. LAs are undergraduate students who, through the guidance of course instructors and a pedagogy course, facilitate discussions among students in a variety of classroom settings. Students become responsible for their own learning as they are engaged with peers to apply course content.

The goals of the LA program impact faculty, students, LAs and the University as a whole. The goals of LA supported courses are:

Faculty

- Cross-departmental discussion and faculty development
- Invigorated teaching through transformed course design

Students

- Increased satisfaction with instruction, collaborative learning, peer interaction, and the overall FAU experience
- Increased opportunities for meaningful group participation ameliorating issues of student isolation and disconnectedness
- Creation of more inclusive learning environments; students see LAs who look like them (*see Appendix*)
- Increased success rates, particularly for students from marginalized groups, helping to promote equity

LAs

- Increased opportunities for on-campus employment in work that develops competency in top areas identified by employers and promotes interest in teaching careers
- Development of stronger institutional and discipline affinity leading to retention of high-achieving students

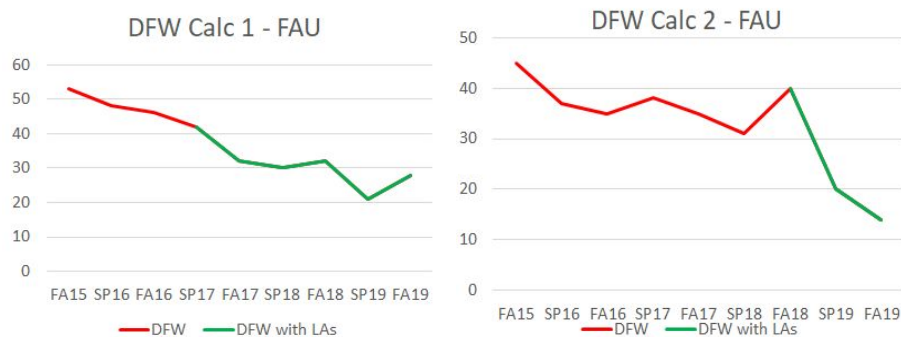
University

- Higher course completion, persistence, and graduation rates
- Increased learning gains and decreases in time to degree and DFW rates across all student demographics

FAU's laser-focus on student success requires attention to its very core activities: teaching quality, curriculum design and assessment, and heightened student engagement. This proposal

is aimed at these core activities through the implementation of an evidenced-based reform program that is widely used across academic disciplines, hailed as effective across all types and levels of postsecondary institutions (107 to date), and has consistently improved student learning and success. Particularly noteworthy is the positive impact of the program on critically important gateway courses which often preclude students, especially members of underrepresented groups, from pursuing certain majors. Many of these majors are in critical shortage areas where job prospects are great, but our ability to fill those jobs remains low.

The University has already invested in the LA program with great success in mathematics. Implementation of the program in Calculus has resulted in cutting DFW rates in half.



The LA Alliance (<https://www.learningassistantalliance.org/>) houses extensive research demonstrating the wide scope of successes with the LA model across institutions and disciplines. Results indicate that learning gains increase, more active learning occurs, and there's a more positive impact on FTIC, first-generation students, and students from marginalized groups¹⁻⁶. Such retention impacts an institution's bottom line. Finally, faculty 'love' it, students are learning, and academic programs thrive.

Outcomes resulting from implementation are quantifiable. Assessment of the LA model at FAU will include:

- Institutional reports: DFW and other performance metric reports
- Surveys: Healthy Minds, Student Satisfaction, Alumni and Employer; SPOT; NSSE
- Learning gains measured through course-specific pre/post tests
- Tracking of faculty development and curricular reforms
- Reporting of LAs in teaching pipelines
- Tracking of faculty and undergraduate research related to the LA program

Given faculty interest in the LA program, the proposed QEP initiative is positioned to have a transformative and lasting impact on the University, its students and faculty and the increasingly diverse community it serves. Embracing the LA program as the focus of FAU's QEP supports the spirit of an institution seeking continuous improvement in student learning outcomes and student success.

References

1. Alzen, J. L., Langdon, L. S., & Otero, V. K. (2018). A logistic regression investigation of the relationship between the Learning Assistant model and failure rates in introductory STEM courses. *International Journal of STEM Education*, 5(1), 56.
2. Herrera, X., Nissen, J.M., and Van Dusen, B. (In Press). Student outcomes across collaborative-learning environments. *Proc. 2018 Physics Education Research Conference*, Washington, D.C. Retrieved from <https://par.nsf.gov/biblio/10099983>.
<https://doi.org/10.1119/perc.2018.pr.Herrera>
3. LA Program Overview, Learning Assistant Alliance, 2018.
<https://sites.google.com/view/laa-resources/program-management/starting-your-program/making-the-case-research-and-presentation-tools/la-program-overview>
4. McQuade, A., Nissen, J.M., & Jariwala, M. (2020). Characteristics of institutions with Learning Assistant programs: An equity investigation. *American Association of Physics Teachers*, 2020 PERC Proceedings.
5. Rocca, K.A. (2010) Student participation in the college classroom: An extended multidisciplinary literature review, *Communication Education*, 59:2, 185-213, DOI: [10.1080/03634520903505936](https://doi.org/10.1080/03634520903505936).
6. Van Dusen, B., and Nissen, J. (2020). Associations between learning assistants, passing introductory physics, and equity: A quantitative critical race theory investigation. *Physics Education Research*, 16(010117).

APPENDIX

While only 12% of FAU faculty and about one-fourth of GTAs are nonwhite, LAs closely mirror the FAU undergraduate student population with over 50% non-white and just under 20% identifying as Hispanic this academic year. As LAs are likely to consider graduate and teaching programs, having a diverse cohort of LAs creates a pipeline of diverse students into GTA and potentially faculty lines.

Fall 2020 - Spring 2021 LA Race & Ethnicity	Number (N=57)	Percent
White	28	49%
Black	14	25%
Asian	12	21%
Mixed Races	3	5%
Hispanic	11	19%
Non-Hispanic	46	81%