

# Benefits of the Undergraduate Teaching Assistant Experience in an Introductory Biology Laboratory Course and Other STEM Courses

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Undergraduate teaching assistants (UTAs) are known to provide benefits to the students they teach, but there have been few studies examining how UTAs themselves benefit from the experience and how the graduate teaching assistants (GTAs) that they assist benefit. We have developed and are continually improving a teaching assistant program for undergraduates in an inquiry-based introductory laboratory biology course that enrolls upwards of 400 students each semester. Each lab section of up to 18 students is led by a GTA laboratory instructor who is assisted by one UTA. UTAs also hold office hours. Our team of about 12 UTAs work closely with their GTA mentors and attend a bi-weekly pedagogical training meeting. We will discuss the benefits and challenges of this UTA program from multiple perspectives, partly measured through UTA surveys, GTA surveys, and student evaluations given throughout the semester. We will also present some results of a related educational research project examining how the benefits of the UTA experience in biology courses, including ours, compares and contrasts with those in other STEM disciplines including chemistry and physics.

**Keywords:** undergraduate teaching assistants, pedagogy training, tutors, discipline comparison

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