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# Implementing an Undergraduate Learning Assistant Program Tailored for Remote Instruction†

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**The inclusion of undergraduate learning assistants (LAs) on the teaching team of a course is a high-impact practice that benefits the teaching team, students, and LAs themselves. LAs are undergraduate students who have taken the course previously and support student learning through facilitated discussion and problem-solving. Unfortunately, in the quick pivot to emergency remote instruction and lacking an online model for LA programs, some instructors temporarily discontinued or scaled down their LA programs. This report describes the recruitment, training, and roles of LAs who were engaged to support a high-enrollment, interactive lecture course delivered by emergency remote instruction. This case study can serve as a model to inform the implementation of a robust online LA program.**

## INTRODUCTION

Student-focused, active teaching practices yield many positive student outcomes, including enhanced learning, lower drop/fail/withdraw (D/F/W) rates (1), and equitable performance (2). One high-impact practice is to expand the teaching team by enlisting Learning Assistants (LAs), undergraduate students who have taken the course previously and support student learning through facilitated discussion and problem-solving (see Learning Assistant Alliance; 3, 4). The addition of LAs increases the level of interaction between the teaching team and students, which is particularly important in remotely delivered courses (5). Serving as an LA is a development opportunity comparable to a research assistantship (6), an opportunity that is scarce at institutions where physical distancing measures are in effect. Unfortunately, the quick pivot to emergency remote instruction and the lack of an online model for LA programs caused some colleagues to temporarily discontinue or scale down their LA programs (personal communication). This report describes the recruitment, training, and roles of LAs who were engaged to support a high-enrollment lecture course delivered by emergency remote instruction. Our objective is to provide a model for the implementation of a robust online Learning Assistant program.

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## PROCEDURE

### Context

Introductory Microbiology (MIC 102) is an upper-division lecture course offered quarterly for majors and nonmajors at the University of California, Davis. The hybrid format of the 330-person spring quarter 2020 offering included synchronous (live) and asynchronous elements that were supported by LAs (syllabus provided as Appendix 1). Scheduled class sessions were delivered as web conferences via the Zoom meeting platform, which was chosen for its interactive features. As an accommodation for students with limited access (7) or located in distant time zones, attendance was optional and session recordings were posted on Canvas (learning management system) for later viewing. The biweekly, 80-minute class sessions were structured as minilectures punctuated by interactive learning and formative assessment activities, with at least one breakout room activity per session. The primary responsibility of the LAs was to facilitate these activities. Additional support was provided through live follow-up sessions (office hours) and a question–answer forum (Piazza).

### Recruitment

Past students were recruited to apply via an e-mail invitation that described the qualification requirements, duties, predicted workload, and potential benefits (Appendix 2). Teaching experience was not required. Described benefits included credits in a "tutoring" course, enhanced mastery of microbiology, professional skill development, a letter of

recommendation, and the opportunity to help others. Every qualified student who completed the Qualtrics application survey (Appendix 3) was invited to join the teaching team and offered the loan of the requisite technology. All LAs were able to muster a computer, web cam, and microphone on their own within two weeks. As during in-person instruction, we enlisted one LA per ~20 students (16 total).

### Preparation

The teaching team attended a weekly "Staph Meeting" (a humorous nod to the subject). These Zoom meetings began with a short reflection activity. We wrote personal observations on what worked, did not work, and suggestions for improvements to a collaborative Google Doc; we also commented on and discussed all posts. We then reviewed the upcoming topics, discussed common misconceptions, tested and refined planned activities, and troubleshot technology-related issues students might experience. Finally, we discussed the theory, evidence for, and practical implementation of effective teaching practices (topics and activities described in Appendix 4).

### Synchronous roles

Learning assistants attended each live class session. Upon joining, the prefix "_LA" was appended to their display name to identify them as peer experts to students and allow the instructor to quickly search and assign LAs as co-hosts. During sessions, LAs responded to Chat posts and facilitated discussion between five and six randomly assigned participants in breakout rooms. Although the number of rooms varied with student attendance, there were typically twice as many rooms as LAs. After each LA joined their assigned breakout room, they could move between rooms to provide technical assistance and support group work. We would have preferred to form stable groups of students that would interact with the same LA over the quarter, as a means of nurturing stronger connections between students and the teaching team. Unfortunately, it was not possible to preassign participants to breakout rooms in Zoom meetings with more than 200 participants. We are currently exploring the capabilities of other platforms to support stable groups.

Engaging students in the breakout rooms was a persistent challenge throughout the quarter, particularly when multiple participants did not or could not unmute their microphone or start their web cam. Our strategies to increase engagement included calling on students by name, verbalizing text posted to the room Chat by muted students, assigning problems that were sufficiently challenging, pairing breakout room activities with a deliverable to submit after class, and randomly assigning roles to group members (e.g., illustrator/reporter has the longest name/smallest pet).

Outside of class sessions, the LAs co-facilitated live office hours, scheduled to accommodate students unable to attend the class sessions. These sessions were ideal for the LAs in that they could focus on teaching just a few students and get real-time feedback on their teaching approach. The LAs opened digital copies of all slides and assessments in anticipation of screensharing requests and took turns responding to Chat and verbal prompts. The LAs were given free access to all course resources and a Piazza site where the teaching team could post questions anonymously, free of potential embarrassment. In addition, if LAs requested support during their office hours, the instructor joined their Zoom meeting but remained inactive (camera off, microphone muted) until called on. Some LAs worried they might give incorrect answers even though their role was to provide guidance, not answers. Building LA confidence will be a focus of future offerings.

### Asynchronous role

The teaching team provided nearly around-the-clock support by responding to student posts on the Piazza site. Several LAs were highly active on Piazza and appreciated its asynchronous nature, which allowed them to research answers before responding. They could choose to remain anonymous to the students or reveal their identities on Piazza posts.

## CONCLUSION

LAs were critical for the successful implementation of the remotely delivered MIC 102 course as an interactive and supportive learning experience. They facilitated content delivery, engaged students, and shared their enthusiasm for the topic. As a final tip to implementing an LA program, we recommend offering a variety of roles for LAs to choose from such as Zoom scheduler, tech support, lead LA, office hour facilitator, Piazza responder, etc., to leverage their various strengths and accommodate their preferences. For example, English language learners who find it challenging to converse through screens and LAs with unreliable Internet may prefer roles in logistical or asynchronous support. Visit the Learning Assistant Alliance (3) for additional resources.

## SUPPLEMENTAL MATERIALS

Appendix 1: MIC 102 remote syllabus
Appendix 2: Template for invitation to apply for LA position
Appendix 3: Qualtrics survey template for LA application
Appendix 4: Training and pedagogy activities

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