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Julie Bickner  
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CU Boulder Learning Assistant Program
2021-2022 ANNUAL REPORT

VISION
The vision of the Learning Assistant (LA) model at CU Boulder is to efficiently build lasting capacity among faculty, courses, and departments for sustained offerings of high quality, learner-centered instruction. In these settings, every student feels included and valued and is comfortable accessing multiple forms of support inside and outside of the classroom. CU Boulder students who serve as LAs and LA Mentors become effective leaders, teachers, and team members, prepared for the increasingly diverse and interdisciplinary workforce.

MISSION
The mission of the CU Boulder LA program is to provide infrastructure necessary for improving student success by increasing the diversity of CU Boulder’s instructional teams through the inclusion of pedagogically trained, undergraduate Learning Assistants (LAs). Ongoing development opportunities and communities are available for faculty, departments, and undergraduates with continued support leading to growth and development as educational leaders, mentors, and state of the art educational innovators. The LA model is an efficient, effective, and equitable program for building and maintaining excellent experiences for students and faculty across the CU Boulder campus.

AY22 numbers.
*There is some duplicated headcount
WHAT’S NEXT?

LAs diversify instructional teams in a variety of ways, increasing access and voice for students. However, in the upcoming years we will continue to work to increase the ethnic diversity of LAs, which is currently about the same as campus. We have two vacant spots on the Advisory Board, which we hope to fill with members of the campus community who represent efforts to increase diversity, equity, and access more broadly.
CU Boulder Learning Assistant Program
2021-2022 ANNUAL REPORT

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VISION
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MISSION
The mission of the CU Boulder LA Program is to provide infrastructure (human and technological) necessary for improving student success by increasing the diversity of CU Boulder’s instructional teams through the inclusion of pedagogically trained, undergraduate Learning Assistants (LAs). Ongoing development opportunities and communities are available for faculty, departments, and undergraduates leading to growth and development as educational leaders, mentors, and state of the art educational innovators. The LA model is an efficient, effective, and equitable program for building and maintaining excellent experiences for students and faculty across the CU Boulder campus.

OVERVIEW OF LA MODEL
The Learning Assistant (LA) model focuses on faculty members’ course innovations at four stages of the instructional cycle: planning, implementation, reflection, and revision. Faculty typically become interested in LAs when they seek to make changes to their courses for a variety of reasons, for example, to improve learning outcomes for a greater diversity of students, to reduce failure rates, to engage students actively during classroom time, and to improve students’ sense of inclusion and belonging in their course and discipline.

LAs help faculty members make changes to their courses and provide them with important insight about how students are experiencing the course. In addition to helping enact learner-centered pedagogies, LAs provide relevant guidance to students on everything from how to study for the course to where to find mental health resources on campus. A national research agenda has emerged and has led to multiple dissertations, an annual conference focusing on research on all aspects of the LA model, and a review article of research on many facets of the LA model (Barrasso & Spilos, 2021).

Research shows that students in LA-supported courses have improved learning outcomes compared to courses that were not supported by LAs (Pollock, 2009; Van Dusen & Nissen, 2019), and these outcomes have been shown to be even greater for students from traditionally underrepresented groups (Sellami et al., 2017). In a study with over 20,000 students over six years that controlled for instructor effect, Alzen, Langdon, & Otero (2018) demonstrated a 60%
decrease in failure rates in Calculus, Chemistry, and Physics at CU Boulder. These impacts are largely due to the ability of LAs to facilitate academic and social integration and belonging (Clements et al., 2022; Top, 2019). LAs disrupt traditional power structures since they serve both as a part of the undergraduate student body and as legitimate members of the instructional team. In this way, LAs provide connective tissue between the institution and the students, leading to greater student success (Talbot, Hartley, Marzetta, & Wee, 2015). LAs themselves walk away with increased content knowledge and stronger disciplinary identities (Close, Conn, & Close 2016), and they are more likely to graduate within 6 years than a matched sample of peers (Otero, 2015). Those who become secondary teachers are more likely to use learner-centered teaching practices than a matched sample of teachers (Grey, Webb, & Otero, 2016). Researchers at CU Denver have established an Action Taxonomy for LAs (ATLAs) which categorized LA classroom moves (Thompson et al., 2020).

“LAs maintain both a peer and educator role, which may allow the breaking down of psychological barriers in the minds of students due to formal boundaries, possibly preventing them from seeking help for fear of bothering the professor or appearing incompetent.” (LA)

LA Activities: LAs engage in three main activities: LAs (a) lead learning teams in classrooms, where students work in small groups on group-worthy activities, (b) meet weekly with the lead faculty member of the course to plan, prepare, and reflect, and (c) attend a weekly pedagogy course focusing on practical techniques for enhance learning and. This pedagogy course is required for all first-time LAs. LAs that return for a second (or more) time become a part of the Returning LA community, where they meet regularly and continue to discuss pedagogical strategies and best practices to engage students.

Through the semester-long pedagogy course, their interactions with students, and through their weekly meetings with the lead instructor of the course, LAs carry important messages throughout campus. The LA Program also carries important messages throughout campus both through frequent interactions with faculty and through LA Campus program management software. Themes from these messages are highlighted below.

Inclusive Classrooms: LAs are a part of the instructional team. They provide direct support to faculty and students. They relate to students, give them voice, care about them, and help them learn. They meet weekly with the lead instructor to provide insight on how students are experiencing the course and to plan for the upcoming week.

“Working with LAs has helped me refresh my teaching strategies and resist the temptation to just do what's worked in the past. I enjoy helping the LAs take on more responsibility and gain confidence in their leadership skills, and in turn, this experience reminds me of the greater purpose and goals of education.” (ENGL Faculty member)
Faculty Development and Classroom Innovation: Faculty who work with LAs participate in workshops and receive weekly newsletters that focus on pedagogy, learner-centered teaching, course design, use of LAs, and inclusivity. In the online Faculty Course Proposal (FCP) faculty articulate course design, innovation ideas, plans for using LAs, and plans for assessing outcomes. Through the LA Campus software (developed at CU Boulder), faculty then receive feedback first from their Departmental Coordinator (DC) and then from the campus LA Program Coordinator (PC), who meets regularly with the DCs.

System of Innovation: Faculty reflect on their innovations throughout and after implementation. They reflect individually, with LAs, with other faculty and LA Program staff. Their learning is reflected in subsequent their Faculty Course Proposals.

“My work as an LA involves working with the university to provide meaningful feedback on their method of instruction, their students and the effectiveness of the LA program as a whole” (LA)

Individualized faculty mentoring by LA Program staff. The LA Program builds relationships with hundreds of faculty members throughout campus and continually builds knowledge of instructional innovation across hundreds of CU Boulder courses. Thus, LA Program staff members are able to provide timely, relevant e-mail, Zoom, and in-person consulting for faculty including course design, use of LAs, best practices with Canvas, remote instruction, and more.

LAs are supported by a weekly pedagogy course or Returning LA community and by undergraduate LA Mentors, who observe and consult with LAs. The pedagogy course introduces skills such as questioning, listening, wait time, feedback, compassion, inclusion, metacognition, and learner-centered teaching. Faculty receive a weekly newsletter with the pedagogy concept of the week, suggestions for their meetings with LAs, and other program highlights and events. Undergraduate LA Mentors receive intensive training on conferring, consulting, and mentoring. They meet weekly with their “PODs” of LAs and observe them and provide feedback.

Undergraduate LA Mentors are the eyes and ears of the LA Program. They provide insight regarding classroom implementation, providing early alerts of areas of interest and concern. This often leads to faculty consultations, facilitated by LA Program staff regarding needed improvements in course designs, uses of LAs, and improved student experiences. LA Mentors also raise awareness of successful innovations, allowing LA Program staff to spread good ideas and provide recognition for faculty and departmental successes.

The LA infrastructure provides an efficient mechanism for continued growth of faculty and course designs, and dissemination of educational innovations throughout campus. Hundreds of faculty members engage each year and share innovations with one another. This leads to a sustained capacity for improved student success for a great diversity of students at CU Boulder.
LA PROGRAM STAFF AND FINANCES

In AY22, 111 faculty members used LAs in the College of Arts and Sciences, the College of Engineering and Applied Sciences, Leeds School of Business, and the College of Media, Communication, and Information. A&S faculty were from 14 departments, CEAS faculty were from 2 departments, foundational courses in LEEDS and CMCI, and 2 departments at Front Range Community College (FRCC). FRCC was supported by a grant. A total of 407 LAs (230 New LAs and 168 Returning LAs) served on the instructional teams for 134 CU Boulder classes (85 unique), impacting 23,731 student seats, for a cost of approximately $38.00 per impacted seat (or $55.00 per impacted seat if departmental financial contributions are considered). The 407 CU Boulder LAs were supported, observed, and mentored by 50 undergraduate LA Mentors, who had intensive training and support by LA program staff.

The LA program staff consisted of 5 individuals working full-time with the program: 1-managing director, 2-teaching assistant professors, 1-technology developer and manager, and 1-administrative assistant. Also 1-part-time lecturer (Dr. Steve Iona) assisted throughout the year, and the program is headed by 1-tenure-track faculty director.

Of the funds allocated by the Provost in AY22, 48% were spent on the staff positions described above, 41% were spent on undergraduate LAs and LA Mentors (this paid for only 50% of LAs—departments matched an equivalent number of LAs, and 3% of the funds were spent on events, supplies, and technology services (e.g. server space at CU). The full breakdown of Provost funds is shown in figure 1.

Figure 1. Distribution of campus funds, does not include department contributions.
Other staff positions associated with the International Learning Assistant Alliance that runs through CU Boulder are not funded by CU Boulder—they were funded by grants and revenue generated from the Rate Based Service Activity (RBSA) mostly associated with licensing the LA Campus software (developed at CU Boulder) to other campuses in the Learning Assistant Alliance. Current LA Campus clients are: Boston University, Michigan State, Oregon State, Texas A&M Commerce, Chicago State, Community College of Denver, Metropolitan State University of Denver, CU Denver, Florida Atlantic, Florida Gulf Coast, FRCC, George Mason, University of Hawaii at Mānoa, California State San Bernardino, and Washington State. In AY22 additional revenue was generated through institutional LA workshops for Washington State, University of Louisville, Rutgers, Commonwealth University of Pennsylvania, and Florida Gulf Coast.

**FACULTY, DEPARTMENTS, AND COURSES**

**Departmental Coordinators**

A Departmental Coordinator (DC) is a tenure-track faculty member or an instructor/teaching professor that has taken on the role of coordinating departmental faculty and communicating with the LA Program on behalf of the department. In all cases, DCs review Faculty Course Proposals (FCPs) using the LA Campus software system, every semester, and often provide feedback to the faculty before submitting the FCP to the campus LA Program Coordinator (PC). This helps departments determine which courses are most appropriate for LAs and helps control the flow of FCPs to the program, providing needed insight to LA Program staff about departmental priorities. As an example, the English department now has an internal process for faculty to apply as candidates for submission of FCPs to the LA Program. This takes place before faculty submit FCPs through the electronic system allowing for vetting of departmental priorities and needs before interfacing with the LA Program. Although all departments manage this slightly differently, in all cases faculty ultimately submit FCPs, which electronically triggers an email to their DCs. DCs log into the system and review proposals, provide feedback, and ultimately submit a subset of these proposals to the LA Program through the system functionality. A team of LA Program staff, advisory board members, and faculty ultimately make decisions about which courses are awarded LAs for the subsequent term. When the FCP process is complete, student applications open and faculty log back into the system to review applications, interview, and select LAs. DCs are also instrumental in coordinating LA recruitment and hiring within their departments. Table 1 lists all departments, DCs, and faculty that participated in the LA Program AY22.

“Very coordinated support for teaching my class. The LA Program is putting out a lot of information now, and I am thankful. I could pick and choose easily. (ENVS Faculty member)
Faculty (more information about faculty development is on page 25)

Faculty lead instructional teams that include LAs and sometimes TAs and other faculty members associated with a course. They engage in faculty development opportunities offered by the LA Program focused on learning theory, inclusive teaching practices, best practices with Canvas, coordinating use of LAs with course goals, and community. In AY22, CU Boulder faculty who used LAs in their courses were distributed across the following position types:

- 51 (46%) were tenure-track faculty members
- 54 (49%) were instructors and teaching professors
- 1 (0.9%) was a research faculty member
- 5 (5%) were graduate part time instructors (GTPIs)

The 6 faculty members from FRCC that participated in AY22 were a part of a collaborative grant with the CU Boulder LA Program. FRCC LAs were in Physics and Math courses and these LAs enrolled in a CU Boulder pedagogy course alongside CU Boulder LAs. This led to the transfer of 23 FRCC pedagogically trained students to CU Boulder since Fall 2017 and they continue to work with the program.

Table 1: AY22 CU Boulder LA Program Participating Departments and Faculty
Note that some faculty are listed twice because they teach different classes in two departments

<table>
<thead>
<tr>
<th>Department/Unit</th>
<th>Department or Unit Coordinator</th>
<th>Faculty who worked with LAs AY22 (Summer 2021 - Spring 2022)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Mathematics (APPM)</td>
<td>Seneca Lindsey, Anne Dougherty</td>
<td>Sujeet Bhat, Silva Chang, Anne Dougherty, Seneca Lindsey, Maribeth Oscamou, Eric Vance</td>
</tr>
<tr>
<td>Astrophysical &amp; Planetary Sciences (APS)</td>
<td>John Keller</td>
<td>David Brain, Webster Cash, Jason Dexter, Seth Hornstein, David Malaspina, Chris Lowder</td>
</tr>
<tr>
<td>Atmospheric &amp; Oceanic Sciences (ATOC)</td>
<td>James Rudolph</td>
<td>Gregory Byrd, Elizabeth Cassano, Pedro DiNezio, Jennifer Kay, Sebastian Schmidt, Aneesh Subramanian, Darin Toohey</td>
</tr>
<tr>
<td>Biochemistry (BCHM)</td>
<td>Amy Palmer</td>
<td>Natalie Ahn, Jeffrey Camerson, Joseph Falke, Karolin Luger, Amy Palmer</td>
</tr>
<tr>
<td>Chemistry (CHEM)</td>
<td>Susan Hendrickson</td>
<td>Ellen Broering, Susan Hendrickson, Gordana Dukovic, Akhil Khanal, Alec Kroll, Nabilah Rontu Carlon, Robert Parson</td>
</tr>
<tr>
<td>College of Media, Communications, and Information (CMCI)</td>
<td>Samira Rajabi</td>
<td>Samira Rajabi</td>
</tr>
<tr>
<td>Communication (COMM)</td>
<td>Christy Maurer</td>
<td>Timothy Kuhn, Christy Maurer, Marc Rich</td>
</tr>
<tr>
<td>Computer Science (CSCI)</td>
<td>Supriya Naidu</td>
<td>Asa Ashraf, Sourav Chakraborty, Nikolaus Correll, Dirk Grunwald, Michael Hoefer, Supriya Naidu, Ashutosh Trivedi, Tom Yeh, Maciej Zagrodzki</td>
</tr>
</tbody>
</table>
Continuing Education Online Learning (CEOL) | Laurie Langdon, Betsy McIntosh | COMM: Audra Barber, Ace Eckstein, ENGL: Teresa Nugent
ENVS: Lee Frankel-Goldwater, HIST: David Paradis
PSYC: Brooke Huibregtse, Shaw Ketels, Chelsea Pierotti, Samantha Strife, WRTG: Dawn Colley, Jamal Khilfat

Ecology and Evolutionary Biology (EBIO) | Lisa Corwin | Lisa Corwin

English (ENGL) | Teresa Nugent | Martin Bickman, Rachael Deagman, Jane Garrity, David Glimp, William Kuskin, Teresa Nugent

Environmental Studies (ENVS) | Eve-Lyn Hinckley | Matthew Burgess, Jill Litt, Steven Miller, Carrie Vodehnal

Germanic and Slavic Languages and Literatures (GSLL) | Saskia Hintz | Saskia Hintz

History (HIST) | David Paradis | David Paradis

Leeds School of Business (LEEDS) | Bonnie Auslander | Bonnie Auslander, Kimberly Campbell, Erin Lionberger, Kristin Swisher

Mathematics (MATH) | Daniel Moritz | All Bronstein, Lucas Gagnon, Elizabeth Grulke, Kevin Manley, Ilia Mishev, Jonathan Quantin, Lee Roberson, Harrison Stalvey, Robert Tubbs, Patrick Wynne

Molecular, Cellular, & Dev. Biology (MCDB) | Christy Fillman | Justin Brumbaugh, Christy Fillman, Nancy Guild, Michael Klymkowsky, Jenny Knight, Jennifer Martin


Psychology (PSYC) & Neuroscience (NRSC) | Heidi Day, Natalie Smutzler | NRSC: Serge Campeau, Heidi Day, Alison Vigers
PSYC: Joanna Arch, Brooke Huibregtse, Shaw Ketels, Chelsea Pierotti, Soo Rhee, Natalie Smutzler, Samantha Strife, Tina Pittman Wagers

FRCC (Boulder Campus) | Christy Gomez | MAT: Aaron Allen, Stephanie Beck, Christy Gomez, Kenneth Monks, Laken Top, PHY: Anthony Smith

LA-Supported Courses in AY22
There were 134 LA-supported courses at CU Boulder in AY22 and 7 at FRCC.
- 80 of the courses had used LAs in prior semesters but underwent significant innovation and/or had a new faculty instructor in AY22
- 19 courses were in their first semester of using LAs
- 42 courses were more established in their uses of LAs

Of the 134 courses at CU Boulder
- 57 were at the 1000-level (15,783 students, 248 LAs)
27 were at the 2000-level (5,669 students, 99 LAs)
36 were at the 3000-level (1,625 students, 57 LAs)
14 were at the 4000-level (699 students, 31 LAs)

As mentioned earlier, with LA Program guidance, departments generally make decisions about which courses are the best candidates for LAs. The needs that faculty reported in their FCPs for requesting LAs for AY22 are summarized in figure 2.

**Reasons for Requesting LAs during AY22**

- LAs enable active learning & foster group work
- LAs are a resource for additional help, give feedback & guidance
- LAs improve student performance in the course
- LAs are more approachable than TAs/instructors
- LAs have a different perspective than TAs/instructors on course content
- LAs foster student engagement and motivation with the course
- LAs are thoughtful and intentional collaborators, with faculty, in course

% of Faculty Course Proposals Giving Reason

Figure 2. Reasons faculty gave for wanting to include LAs in their courses in their 2022 FCPs.

**Justification for Uses of LAs in Different Level Courses**

In this section, the use of LAs in different levels of courses is justified. In most cases, departments make decisions and screen the courses that they feel are good candidates for the use of LAs. This usually takes place in consultation with LA Program staff. Detailed tables follow general descriptions of uses in course levels.

**1000-Level Courses:** Large-enrollment introductory courses have the greatest need for assistance for students in pre-requisite courses that cross majors. Our largest LA-supported courses include: General Physics 1 and 2 (PHYS 1110, PHYS 1120), General Chemistry 1 and 2 (CHEM 1113, CHEM 1133), Computer Science 1 (CSCI 1300), and Calculus 1 (MATH 1300), all courses in which LAs spend significant time directly supporting students in required settings.

“LAs are a vital component in our recitation sections as they aid us in the implementation of active learning projects through assistance in facilitating group projects. Our LAs are a great benefit for encouraging students to ask questions and discuss ideas in class since students are less intimidated by the LAs, in comparison to either the TA or instructor. The LAs also provide us a student’s perspective when we discuss ideas that students might struggle with or ways to effectively implement activities.” (MATH 1300 faculty member)
2000-Level Courses: Many departments additionally need support in gateway courses that set students up for success within a particular major. Some examples include: Computer Science 2 (CSCI 2270), Principles of Genetics (MCDB 2150/2152), Foundations of Modern Physics (PHYS 2170) and Classical Mechanics & Mathematical Methods 1 (PHYS 2210), Laboratory Techniques in Neuroscience (NRSC 2200), Computational Techniques in Astronomy (ASTR 2600), and Literary Analysis (ENGL 2102).

“LA support is essential to make the small-group interactive learning activities (clicker questions and tutorials) effective for the students in a class of this expected size. I am also interested in exploring further into “flipping the classroom”, which may include giving students time in lecture to work on homework problems in groups, during which the LAs could help to answer student questions.” (PHYS 2210 faculty member)

3000 and 4000-Level Courses: In other departments, department majors struggle most at capstone and upper division courses. In particular, Developmental Psychology (PSYC 3684), Research Methods in Clinical Psychology (PSYC 4443) and Social Psychology (PSYC 4376), Metabolic Pathways and Human Disease (BCHM 4720), Advanced German 1 (GRMN 3010), upper division writing electives including CE-WRTG 3020 and CE-WRTG 3030, and Historical Writing and Thinking (HIST 3020).

“I began using LAs in this course over 5 years ago and it was the best teaching decision I have made. Because of their contributions, we can hold many more Student Hours a week, provide more individualized instructional attention in lab, and provide students with an additional support system in a class that feels intimidating to many students. The 4000-level methods course requirement is designed to be one of the more (most) challenging courses a student takes in our major so the more ways we can help students succeed, the better. Specifically, LAs work with students on lengthy and challenging Article Assignments, weekly quizzes, lab sample problems, exam review, and the final lab project. Students also have indicated that they like it when LAs help teach some of the lab materials.” (PSYC 4443 faculty member)

LAs Are Used In Different Contexts: Another way to categorize courses is how LAs are integrated into course components. Based on FCPs and information provided by LAs and their Mentors, we categorized LA-Supported courses according to settings in which LAs interact with students. These categories are: (1) lecture, (2) recitation, (3) lecture + recitation, (4) laboratory, and (5) online/asynchronous settings. In many cases these experiences are supplemented with out-of-class, LA-facilitated office hours, study sessions, and help room sessions. Table 2 provides a description of each of these LA contexts along with the number of courses that used LAs in this way (gray rows indicate courses in their first semester using LAs).
Figure 3. In addition to being used at different course levels, LAs are used in different contexts.

Table 2: Summary of general uses of LAs. More details are provided after the table.

<table>
<thead>
<tr>
<th>Course Format</th>
<th>Description</th>
<th># Courses</th>
<th># LAs</th>
<th># Students enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture Model A</td>
<td>LAs go to all lectures and interact with students some of the time</td>
<td>27</td>
<td>52</td>
<td>1919</td>
</tr>
<tr>
<td>Lecture Model B</td>
<td>LAs attend one “lecture” session which is focused on active learning 100% of the time</td>
<td>9</td>
<td>44</td>
<td>4123</td>
</tr>
<tr>
<td>Recitation</td>
<td>Small sessions (~24 students) working in groups. LAs facilitate group-worthy activities</td>
<td>20</td>
<td>106</td>
<td>7333</td>
</tr>
<tr>
<td>Lecture + Recitation</td>
<td>LAs interact with students during lecture (e.g. clicker questions) and recitation/group work</td>
<td>42</td>
<td>138</td>
<td>8184</td>
</tr>
<tr>
<td>Laboratory</td>
<td>LAs work with students individually or in groups on projects and experiments.</td>
<td>13</td>
<td>41</td>
<td>1463</td>
</tr>
<tr>
<td>Asynchronous</td>
<td>LAs interact with students asynchronously via discussion boards, PDF-annotation tools, GroupMe, email, videos, etc.</td>
<td>30</td>
<td>34</td>
<td>1027</td>
</tr>
</tbody>
</table>

Tables 3-8 show the courses that use LAs in each of these ways. The rightmost column shows the LA to student ratio; it does not account for the presence or absence of other instructional team members such as graduate TAs or additional instructors. In some cases, the LA to student ratio may be different from ideal due to difficulties recruiting a sufficient number of qualified
LAs. Note that different course designs require different LA to student ratios. Also note that in many cases, LAs interact with several recitation-style sessions so although there may be 1 LA to 100 students, this may be with 20 student at 5 different times each week. Courses that withdrew or were not awarded LAs are shown in Appendix A.

LAs used in Lecture: 36 Courses, 96 LAs, 6042 Students Enrolled in AY 22
In Lecture courses LAs support student learning by facilitating active learning in clicker questions, breakout/group activities/discussions, and fully flipped classroom-style. In Model A LAs attend all lecture course sessions (typically 3x/week) and facilitate group activity during some of the sessions (typically 15% to 80% of class time). In Model B, LAs attend one of two or three class sessions per week and facilitate student engagement 100% of those sessions, which are explicitly designed for group work and use of LAs, such as in a flipped classroom situation.

Table 3: Lecture Model A: LAs go to all lectures and interact with students some of the time: 27 Courses, 52 LAs, 1919 Students Enrolled (LA to student ratio is in last column)

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course #</th>
<th>Dept</th>
<th>Course Name</th>
<th># LAs</th>
<th># Students</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2217-Fall</td>
<td>ASTR 1000</td>
<td>ASTR</td>
<td>Astrophysical &amp; Planetary Sciences</td>
<td>4</td>
<td>430</td>
<td>1:108</td>
</tr>
<tr>
<td>2217-Fall</td>
<td>ASTR 2600</td>
<td>ASTR</td>
<td>Computational Techniques</td>
<td>1</td>
<td>25</td>
<td>1:25</td>
</tr>
<tr>
<td>2217-Fall</td>
<td>BCHM 1020</td>
<td>CHEM</td>
<td>A Path to Success: Introduction to the Biochemistry Major</td>
<td>2</td>
<td>100</td>
<td>1:50</td>
</tr>
<tr>
<td>2217-Fall</td>
<td>COMM 3760</td>
<td>COMM</td>
<td>Rhetorical Research Methods</td>
<td>1</td>
<td>27</td>
<td>1:27</td>
</tr>
<tr>
<td>2217-Fall</td>
<td>ENGL 3267</td>
<td>ENGL</td>
<td>Woman Writers</td>
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<td>MATH 3120</td>
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<td>PHYS</td>
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<td>PHYS</td>
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<td>Core Concepts in Physical Chemistry for Biochemists</td>
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Table 4: Lecture Model B: LAs attend one “lecture” session which is focused on active learning 100% of the time: 9 Courses, 44 LAs, 4123 Students

This model is used in the MATH department, where each LA supports 3-4 sections of the course, interacting with the same 60-80 students per week in interactive group projects.

Table 5: LAs used in Recitation: 20 Courses, 106 LAs, 7333 Students

Recitation, also known as “group study hours,” “workgroups,” and “co-seminars,” are sessions that are held in addition to lecture. During these sessions (typically 5-30 students), students work in groups of 4-5 on various problems or projects. LAs meet with the same groups each week and often facilitate multiple recitation sections, optimizing the LA to student ratio.
Table 6: LAs used in Lecture + Recitation: 42 Courses, 138 LAs, 8184 Students
LAs interact with students during lecture and recitation/group work sessions, in relatively equal proportions. Typically, both of these course elements are required for students enrolled.

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course #</th>
<th>Dept</th>
<th>Course Name</th>
<th># LAs</th>
<th># Students</th>
<th>Ratio</th>
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<td>ATOC</td>
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<td>ATOC</td>
<td>Weather and the Atmosphere</td>
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<td>350</td>
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<td>ATOC</td>
<td>Our Changing Environment: El Nino, Ozone, and Climate</td>
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<td>Weather and the Atmosphere</td>
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</table>
Table 7: LAs used in Laboratory: 13 Courses, 41 LAs, 1463 Students

Students work in groups of 3 - 5 on hands-on experimental or studio projects and labs. Laboratory attendance and active participation is required of all students. Similar to recitations, LAs typically work with instructors and/or TAs to cultivate inclusive classroom environments.

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course #</th>
<th>Dept</th>
<th>Course Name</th>
<th># LAs</th>
<th># Students</th>
<th>Ratio</th>
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<td>ASTR</td>
<td>Accelerated Introductory Astronomy 1</td>
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<td>Research Methods in Clinical Psychology</td>
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<td>ASTR 3400</td>
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<td>Research Methods</td>
<td>1</td>
<td>20</td>
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<td>2221-Spring</td>
<td>PHYS 2010</td>
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<td>Algebra based Physics 1</td>
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<td>NRSC 2200</td>
<td>PSYC</td>
<td>Laboratory Techniques in Neuroscience</td>
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<td>PSYC 4443</td>
<td>PSYC</td>
<td>Research Methods in Clinical Psychology</td>
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<td>Research Methods in Social Psychology</td>
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</tbody>
</table>
Table 8: LAs used in Asynchronous Courses: 30 Courses, 34 LAs, 1027 Students

LAs interact with students almost exclusively asynchronously via discussion boards, PDF-annotation tools like Perusall, chat-style tools like GroupMe, email, videos, etc. In these courses, students are required to engage in conversation with the LA and with one another, as an essential source of feedback during the learning process.

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course #</th>
<th>Dept</th>
<th>Course Name</th>
<th># LAs</th>
<th># Students</th>
<th>Ratio</th>
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</thead>
<tbody>
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<td>CEOL</td>
<td>Freshman Writing Seminar</td>
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<td>CEOL</td>
<td>Greeks, Romans, Kings, and Crusaders</td>
<td>1</td>
<td>25</td>
<td>1:25</td>
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<tr>
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<td>CE-PSYC 1001</td>
<td>CEOL</td>
<td>General Psychology</td>
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<tr>
<td>2214-Summer</td>
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<td>CEOL</td>
<td>Abnormal Psychology</td>
<td>1</td>
<td>35</td>
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<tr>
<td>2214-Summer</td>
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<td>2214-Summer</td>
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<td>Writing, Reading, Culture</td>
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<td>CEOL</td>
<td>Greeks, Romans, Kings, and Crusaders</td>
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</table>
### Additional LA Roles

Most LA appointments include responsibilities in addition to working with students during class time, such as help rooms, LA-led study sessions, and office hours. In these settings LAs support students one-on-one and/or in small groups. **Help Rooms** are student support resources at a specified location where students can find help during most weekday hours. LAs often spend 1-2 hours per week helping to staff help rooms. Notable examples include the Math Academic Resource Center (MARC) and Physics Help Room, both are highly utilized and appreciated by LAs and students alike and members of the Academic Resource Center Network. **LA-led study sessions** are typically held when an LA feels that it is important or in coordination with their lead faculty around exam review schedules. These range from formal to informal sessions with attendance ranging from 10 to hundreds of students. LAs typically consult with their lead instructor or pedagogy course instructors. **Office Hours**: may take place in a departmentally-specified location, informal spaces on campus, off campus, or online. These hours are not generally publicized beyond a particular course section, and students typically only visit the LA specific to their course section. Examples are provided below:

- **“Teach an LA”**: These activities were pioneered in the PSYC department, and have since spread to ENGL and HIST. Students are required to visit an LA for 10 minutes once per unit to talk through their understanding of a piece of course content. This structure encourages students to build relationships with their LA(s) and one another.
- **LA check-ins**: Students are expected to sign up for one or more of these 10 - 15 minute meetings within the first few weeks of the semester to meet the LA and ask questions.
about course structures and content. These meetings are a great way to build connection and community, particularly in asynchronous courses.

- **Homework:** In courses with challenging homework assignments, students tend to utilize LAs more frequently. This is particularly true in CSCI where novice programmers struggle with learning how to debug their code.

- **Quiz-checks:** Students are able to meet with an LA to talk through their responses to a content quiz and earn back some points, with goals of helping to develop student metacognition.

**LAs and Mentor Characteristics and Responsibilities**

In AY22, 407 CU LAs and 8 FRCC LAs were hired.

- 240 New LAs
- 175 Returning LAs

LAs receive a $1700 stipend per semester for an LA appointment that includes an average of:

- **1 hour/week** of individual preparation and reflection
- **1 hour/week** meeting with Lead Faculty and other members of the instructional team (often including graduate TAs) to reflect on previous week, prepare for next week, provide feedback on how students are experiencing the course, and discuss how learner-centered pedagogical approaches can be tailored for specific courses.

- **6 hours/week** of LA-Student Interactions. Most LAs engage with students across multiple course contexts, including lecture, recitation, laboratory, office hours/help rooms, and/or asynchronous course elements.

There were 50 LA Mentor positions in AY22 to mentor New LAs, observe them, and provide feedback. LA Mentors provide extensive, field-based feedback to the LA Program regarding how courses are being implemented and how LAs are actually being used in these courses. Mentors are highly enthusiastic LAs who offer insight that improves the program.

- 26 New LA Mentors
- 14 Experienced LA Mentors
- 10 Returning LA Leaders

LA Mentors receive a $1000-$1350 stipend for an average of (depending on responsibilities):

- **2 hour/week** of group mentoring + debrief (“Mentor Flock”) on Zoom
- **1 hour/week** meeting with LA Program staff and other Mentors in the Weekly Preparation Meeting.
- **2 hours/week** of on-on-one mentoring sessions and LA Mentor observations that take place between weeks 5 and 11 of the semester. New Mentors have 5 - 8 mentees.
We began piloting the Mentor program several years ago, originally pairing one LA Mentor with one new LA, which provided mentoring to about 10% of new LAs in the program. In order to provide equitable support for all LAs, it has become expensive in terms of actual dollars as well as staff time. Mentors provide valuable information about course implementation to the program, which has been helpful in coaching faculty and in making difficult decisions about whether to continue providing LA resources to faculty who are not meeting expectations, and help to prepare new LAs. However, it will likely not be continued beyond Spring 2023 without additional funding. We are already scaling back the program starting Fall 2022 in ways that could be sustained at current funding levels through Spring 2023.

PROGRAM IMPLEMENTATION
The CU Boulder LA Program implementation consists of three main activities: (1) LA Development, (2) Faculty Development, (3) Semester Timeline. These are discussed here.

1. Learning Assistant Development and Training

1.1 Onboarding: LA Orientation
Every New and Returning LA participates in a two part LA Orientation sequence taking place near the beginning of classes.

Part 1: Asynchronous Orientation is completed prior to the Orientation.
- New LAs complete a ~ 60 minute module designed to help them: (1) Gain a better understanding of the LA Model; (2) Understand the structure and organization of the LA Pedagogy Course; (3) Know how to get paid; (4) go through scenarios designed to understand prejudice, harassment, and retaliation at a university policy level and what it means to be a “mandatory reporter”; (5) Build skills for reducing bias and increasing student belonging and retention.
- Returning LAs complete a ~ 30 minute module designed to help them: (1) Gain a better understanding of what to expect from Returning LA Professional Development; (2) Refresh their understanding of what it means to be a “mandatory reporter” to OIEC.

Part 2: Zoom or In-Person Orientation (in AY22 both orientations were via Zoom)
- New LAs examine the roles and responsibilities of LAs.
- Returning LAs join New LAs during the second half and all LAs work in disciplinary teams to: (1) Consider their roles in supporting student learning; (2) Plan approaches and practices that will help build community and support learning in their specific class; (3) Discuss how to get the most out of their relationships with their Lead Faculty and instructional team; (4) Practice communication tools for challenging interpersonal situations; (5) Ask questions about their role as a mandatory reporter.
1.2 LA Pedagogy Course for New LAs: EDUC 4610 “Becoming a Learning Assistant”
Each New LA enrolls in the LA Pedagogy Course (EDUC 4610, “Becoming a Learning Assistant”) concurrent with their first semester of being an LA. In this course, readings, assignments, class activities, and discussions are designed to help LAs implement evidence-based, learning-centered teaching practices. The main learning goals are: LAs contribute to a supportive learning community and: (A) Build knowledge about how they and their students learn, (B) Practice listening and questioning, eliciting and responding to student ideas, and engaging students in peer interactions that support learning, (C) Develop and practice strategies for facilitating equitable, inclusive, and effective learning environments, and (D) Reflect on their learning, teaching, and views of effective education.
To support these goals, the course is divided into three broad units:

- **Unit 1--What to do:** Skills and strategies for supporting student learning include: questioning, wait time, facilitating student-student interactions, compassion, listening, and how to give effective feedback.

- **Unit 2--When to do it:** Learning theory helps LAs make instructional decisions regarding how, when, and why to use the skills learned in unit 1. This includes discussing noticing and eliciting student ideas, formative assessment, and learner-centered teaching.

- **Unit 3--Why it matters:** The purpose and impacts of education is explored near the end of the course, including discussions around belonging and inclusion, metacognition, the intended and unintended consequences of education, and impacts of the LA Model in higher education.

See Appendix B for a more comprehensive summary of the course including readings, larger assignments, and individual lesson learning objectives. The unique practicum focus (LA placements in disciplinary courses) helps LAs and faculty critically assess the quality and composition of LA-Student Interactions. It also leverages LA Mentors to learn about the individual experiences of LAs and those of their students in every LA-Supported course. LA Mentors then communicate these observations to LA Program staff, facilitating a feedback loop with faculty that ultimately supports faculty development and efficient implementation.

“Being an LA means being the bridge between the knowledge of the professors and the student experience. Even the best teachers can't connect with every student, and it can sometimes be much easier to bond with an educator who is at the same level as you.” (LA)

“Fellow undergraduates are less intimidating, and potentially have an easier time forming relationships with students which encourages excitement and curiosity.” (LA)

“I think our main job is to help students feel more comfortable asking questions and learning in big classes where sometimes it is easy to feel alone and voiceless.” (LA)

“Being an LA means being a mentor for people of a similar age to reach out to without feeling afraid of the fear of being embarrassed.” (LA)

“The role of an LA is also to help create an environment conducive to learning, meaning that it is our responsibilities as LAs to create environments free from judgment, discrimination, and harassment”
Impact on CU Boulder undergraduates who participate as LAs:

Consistent with previous semesters, in Spring 2022, nearly half of all New LAs reported that the most impactful part of being an LA was their own learning. Some examples include growth in self-confidence, coping with difficulty, better understanding of barriers in higher education, communication skills, problem solving, finding joy in teaching, and self-compassion (Fig 4). Figure 5 shows survey responses to how LAs have grown.

LA Mentors support New LA development by interacting with New LAs in two main contexts. In group mentoring, LA Mentors meet with groups of 3 - 5 LAs to troubleshoot the challenges, reflect on their practice, and celebrate the successes of weekly work with students. In individual mentoring sessions and observation, LA Mentors meet one-on-one with each of their mentees before and after an in-class observation of the LAs’ interactions with students. In these sessions, LAs and their mentors critically reflect upon their experiences and approaches, set goals for how they can improve in their goal of supporting student learning, and consider how they can leverage the skills they are learning beyond their LA role.
The final event of the semester is the LA Poster Session, an important community event that brings together CU Boulder and FRCC-BCC LAs, LA Mentors, Faculty, Departmental Coordinators, LA Program staff, and community members. During this event, New LAs share what they have learned as a student, LA, and member of the Instructional Team, and provide advice for future implementations and programmatic improvements.

“Watching my LAs progress from the beginning of the semester where they’re unsure how to even be an LA, to the end, when they look like seasoned pros, and I think that’s really one of the most rewarding parts, knowing that I had even a little bit of a hand in doing that.” (LA Mentor)

“I’ve become more aware of the experiences of students outside of my department. It gives me a better impression of what the university experience is like as a whole for a lot of people. The most interaction I’ve had outside of my department is in the LA Program, so it gives me a more holistic view of the school and the programs that are out there.” (LA Mentor)

The final event of the semester is the LA Poster Session, an important community event that brings together CU Boulder and FRCC-BCC LAs, LA Mentors, Faculty, Departmental Coordinators, LA Program staff, and community members. During this event, New LAs share what they have learned as a student, LA, and member of the Instructional Team, and provide advice for future implementations and programmatic improvements.

Figure 6. Images from the poster session. (Top Left) Dr. Seneca Lindsay, APPM, with his LA and her LA Mentor. (Top Right) Drs. Natalie Smutzler and Chelsea Pierotti, PSYC, with their LAs. (Bottom Left) LA Mentors sharing their experiences. (Bottom Right) Dr. Susan Hendrickson, CHEM, with one of her LAs.

1.3 Continued Support and Development for Returning LAs

After their first semester of serving as LAs, “Returning LAs” participate in a professional learning program that is co-facilitated by LA Pedagogy Instructors and LA Mentors. Per their LA Contract, Returning LAs are expected to meet 80% of these additional expectations to remain eligible for
future hire. LAs need continued pedagogical, practical, and emotional support in their roles, in part, because nearly half of all Returning LAs are in a new course and/or working with new Faculty. They benefit from and thrive within this community. The main goals are to:

- Co-create a community in which LAs can empathize with each other about their unique and challenging roles, creatively brainstorming solutions to problems of practice, and continuing to iterate on their approaches to assisting student and faculty learning.
- Spread pedagogical innovations between New and Returning LAs, across departments, and throughout the university.
- Uncover challenges LAs face requiring LA Program staff mediation and/or intervention.

After LAing this semester I have grown by...

- Developing new teaching skills, improving as an educator through self-reflection and iteration
- Becoming more comfortable and connecting with students
- Self-confidence
- Professional communication and public speaking
- Developing more ways to engage with diverse students
- Adaptability, flexibility, and problem solving
- Compassion and patience
- Time management, planning, and prioritization
- Improving as a student

Figure 5. LA’s descriptions of how Returning LAs continued to develop beyond their first semester in the Returning LA meetings and field experience.

Starting Spring 2023, we will offer a new course, EDUC 4611, “Advanced Topics in LA Pedagogy,” for Returning LAs who would like to invest more time and receive 1 credit for their continued professional development. This will also better align with the Leadership Studies Minor. Currently, EDUC 4610 and EDUC 4620, both 2-credit courses, are offered as electives in the Leadership Minor pathway, however, required electives are 3 courses. With the addition of EDUC 4611, LAs will be able to earn a full 3 credit elective toward this degree program.

“As it’s my last semester being an LA, I just want to express its immeasurable what this program has done for me. I think the community, the pedagogy, the mission – it’s all made me a better person. I obviously could use my LA experience on resumes and stuff, but I think it extends way further than that. Thank you so much for everything.” (Returning LA)
1.4 LA Mentor Training: EDUC 4620, “Learning Assistant Mentoring I”

LA Mentors are experienced LAs who take on responsibilities for mentoring New LAs in their first semester experience. The LA Mentor Program builds on the initial investments made in the pedagogical training of New LAs and provides a pathway for leadership development that contributes to the educational mission of the University. Their primary responsibilities are to: (1) lead weekly group mentoring sessions, in groups of 3-5 New LAs, (2) provide individual mentoring for each mentee, that includes observing New LAs interacting with students in their LA contexts, and (3) engaging in shared problem-solving with other LA Mentors and LA Program staff for issues and challenges that are brought up by New LAs or by LA Mentors. LA Mentors take a 2-credit “Becoming an LA Mentor” course (EDUC 4620), and they participate in weekly preparation sessions with all new and experienced LA Mentors. Our program has trained 78 individual LA Mentors since Spring 2017. The learning goals for this course are ambitious: Throughout Becoming an LA Mentor I (EDUC 4620) LAs will continue to develop their fluency with pedagogical techniques introduced in Becoming a Learning Assistant (EDUC 4610), and work to apply these in their mentoring interactions in order to better support New LAs and student success. By the end of their first semester as an LA Mentor, Mentors will be able to:

1. Harness the power of listening and questioning to support, cognitively challenge, and foster a professional vision for New LAs.
2. More confidently utilize empathy, vulnerability, and self-awareness to build productive and supportive working relationships.
3. Utilize strategies such as wait time and non-verbal communication to foster mentee interactions in group mentoring, and to encourage deeper reflection from mentees in individual mentoring.
4. Support the development of LA agency and self-efficacy by building an understanding that all members of the group have ideas and experiences helpful for solving problems.
5. Utilize data and inferences from observing mentees in their LA contexts to provide feedback to support and challenge LAs in their practice.
6. Flexibly move between approaches to mentoring, depending on the context and needs of their mentee(s).
7. Discuss the broader impacts of the LA and LA Mentor communities at our institutions.
8. Build upon existing skills necessary to grow as a Mentor and support mentee development, including: written and oral communication, organization, time management, accountability, advocacy, and leadership.

To meet these goals, LA Mentors read relevant literature, practice planning, goal setting, and reflection, give and receive feedback on recorded mentoring interactions, and engage in
collaborative projects designed to give LA Mentors an opportunity to dig deeper into a concept, principle, or practice.

2. Faculty Development Program

In AY22, a total of 111 faculty worked with LAs in their courses. The LA faculty community consists of those who are new to working with LAs, as well as those who have many years of experience. Half of these faculty were within their first three semesters experience of working with LAs (regardless of years of experience teaching at CU Boulder). 57 of the 111 faculty members were in their first year and a half of using LAs.

- 28 faculty members (25%) were in their 1st semester working LAs
- 15 faculty members (14%) were their 2nd semester working with LAs
- 14 faculty members (13%) were their 3rd semester working with LAs

Faculty within their first semesters of using LAs are just beginning to implement their planned course innovations. They learn how to effectively incorporate LAs into their instructional teams, improve Diversity, Equity, and Inclusion (DEI) in their courses, and run weekly preparation meetings for their LAs and graduate TAs. They require more focused sessions and consulting with the LA program, as well as early-semester check-ins to problem-solve issues and evaluate success.

Faculty members who have been working with LAs beyond three semesters continue to benefit from support and community. The LA Program engages these more experienced faculty members in community sessions that create a platform for faculty to share ideas and challenge each other to try new approaches at a more expert level, as well as in sessions that include less experienced faculty who can also learn new ideas. Even faculty who have worked with LAs for more than five years continue to report new approaches they want to try and what’s working in terms of student outcomes in their Faculty Course Proposals. In AY22, 54 of the 111 faculty members had two or more years of experience working with LAs.

- 23 faculty members (21%) had 2-3 years of experience working with LAs
- 16 faculty members (14%) had 3-5 years of experience working with LAs
- 15 faculty members (14%) had more than 5 years of experience working with LAs
2.1 Onboarding for New Faculty

The LA Program provides targeted programming for faculty who are within their first three semesters of working with LAs in their course(s). This includes consultations on Faculty Course Proposals (FCPs) prior to the semester(s) they work with LAs, a pair of workshops on how to integrate LAs in their learner-centered course(s) and how to design and run their weekly prep meetings with LAs, and early semester check-ins.

Faculty who are new to working with LAs typically require at least three semesters to learn how to best utilize LAs in their student-centered courses. Often, faculty are simultaneously making changes to their course structures to make them more inclusive and interactive, while also learning how to work with LAs as part of their instructional team. The LA Program hosts early semester check-ins (weeks 3-5 of the semester), which are structured to bring together small groups of faculty members to share what’s working for improving DEI, and to get ideas for how to make changes for things that aren’t working as well.

A current challenge is that half of the faculty using LAs in AY22 were new to working with LAs. While we believe it is important to support new faculty and build capacity on campus, it is important for us to assess the longevity of each faculty member with whom we work. For example, it is most efficient to invest in faculty members that will likely be teaching at CU Boulder for several years. In AY22, 57 of the 111 LA faculty were within their first three semesters of working with LAs (regardless of how long they have been at CU Boulder). Of those, 28 were using LAs for the very first time, either in Fall 2021 or Spring 2022. One argument is...
that it is important for departments and faculty to be able to commit to continued participation, so that future semesters can continue to build on initial investments in these “new to LAs” faculty. However, if the goal is to onboard as many new faculty members as possible, then additional resources may be needed.

In AY22, 67% of “new to LAs” faculty engaged in some aspects of the programming support. Of the 19 newer faculty who did not participate in faculty sessions or check-ins, 15 still engaged often with the weekly newsletters. All faculty who work with LAs are expected to attend in an “All LA Faculty” session once per year that reviews foundations of the LA model, engages faculty in a pedagogy-course related activity, utilizes instructional tools that they may want to implement in their courses, and provides updates about the pedagogy course, Returning LA communities, and LA Mentor program as well as ways in which the LA Program will communicate with faculty in the current semester. AY22 faculty sessions are shown in table 9.

Table 9. Faculty sessions offered in AY22 by LA Program

<table>
<thead>
<tr>
<th>Session Name</th>
<th># Sessions Offered</th>
<th># Attendees</th>
</tr>
</thead>
</table>
| All Faculty: “The New Normal for You and Your Relationship with the LA Community”  
*This session was designed to kick off the semester together by (re)connecting and learning how the LA Program would be supporting faculty and LAs, so that faculty were better able to support their LAs and students.* | 7                  | 68          |
| New LA Faculty Series: “Getting the Most out of Working with LAs”  
*This session was designed to introduce/remind faculty about the core elements of the LA Model. Faculty had opportunities to analyze LAs interacting with students, either from video of an in-person class or through an example of an asynchronous discussion board.* | 5                  | 21          |
| New LA Faculty Series: “Getting the most out of your weekly prep sessions”  
*During this session faculty considered goals and structures for running your weekly instructional team preparation meetings, and planned for upcoming meetings.* | 2                  | 6           |
| New LA Faculty Series: Early Semester Check-ins  
*During this session LA Program staff and faculty spent time discussing early successes, challenges, and otherwise problem-solving as a community.* | 13                 | 18          |

In addition to faculty sessions, individual consulting, and feedback on Faculty Course Proposals (FCPs), throughout the semester the LA Program emails a **Weekly Faculty Newsletter** that
highlights the pedagogy topic of the week, with suggestions for how to discuss and use the ideas in weekly preparation meetings. These “Pedagogy Highlights” can be found on our CU LA Program Website under “Faculty Resources”

3. Semester Timeline

Figure 8 shows the standard timeline for programmatic activities throughout a given semester. Prior to each semester (typically the week before), faculty sessions are offered, a mandatory LA orientation takes place, and LA Mentors are prepared. LA Program staff frequently engage in “just-in-time” faculty consulting and mentoring. During a given semester (from beginning to end of term), the LA Pedagogy course takes place weekly, Returning LA meetings are held, and weekly LA Mentoring Training sessions take place. Also, faculty members who are teaching LA supported courses meet with their LAs weekly. Faculty also meet with LA program staff throughout the semester for check ins, problems solving, or any other type of management that is necessary. At the end of each semester the LA Poster Session provides a community event with light snacks and posters, fostering community and knowledge building. Approximately 4 to 6 weeks after a give semester begins, we begin planning for the upcoming term. Faculty Course Proposals (FCPs) open and remain open for two weeks on the LA Campus Software system. During this time, faculty receive feedback from their Departmental Coordinators (DCs) and LA Program Coordinators (PCs). After a round of revision, decisions are made, and faculty are notified if they have been awarded LAs. These courses then appear on the Student Application page, and students have the opportunity apply to be an LA. They are allowed to select three choices but will typically only be hired for one. Faculty then hire LAs, using LA Campus software, and make offers. The LA Program hires LA Mentors. This all takes place before the end of the term prior to the one for which we are hiring.

Figure 8. Timeline of activities of the LA Program for a given semester
3.3. Advisory Board

An Advisory Board is comprised of a diverse group of colleagues that have similar interests or directly participate in the program. The advisory board meets at least two times per year. Their names are positions are listed below. Sadly, we two of our board members left CU Boulder during AY22 (Foster and Meyers) and will be filling their positions this year.

- Kathy Schultz, Dean and Professor of Education
- Teresa Nugent, Associate Teaching Professor of English
- Rob Tubbs, Associate Professor of Mathematics
- Seth Hornstein, Associate Chair for Undergraduate Studies, Observatory Director
- Beth Meyers (Assistant Vice Provost of Student Success Initiatives)
- Stephanie Foster, Assessment Lead with the Center for Teaching and Learning
- Ian Her Many Horses, Assistant Teaching Professor, Co-Director of CU Teach

RESOURCES

- Link to CU Boulder LA Site: https://www.colorado.edu/program/learningassistant/
- Link to Resources for LAing: https://www.colorado.edu/program/learningassistant/laing-resources
- Link to Resources for Faculty: https://www.colorado.edu/program/learningassistant/faculty-la-resource

REFERENCES


APPENDICES

Appendix A: Courses that initiated FCPs but did not receive LAs

There are a number of reasons why a proposed LA-supported course may be withdrawn and/or are denied LAs. This could include realization that the course is not “LA-ready,” departments re-prioritizing where they are allocating their limited resources, challenges recruiting LAs, etc.

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course #</th>
<th>Dept</th>
<th>Course Name</th>
<th># Students</th>
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<td>CEOL</td>
<td>First-Year Writing and Rhetoric</td>
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<tr>
<td>2214-Summer</td>
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<td>CEOL</td>
<td>Special Topics in Writing</td>
<td>19</td>
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<tr>
<td>2217-Fall</td>
<td>CE-COMM 1210</td>
<td>CEOL</td>
<td>Perspectives on Human Communication</td>
<td>35</td>
</tr>
<tr>
<td>2217-Fall</td>
<td>CE-COMM 3320</td>
<td>CEOL</td>
<td>Persuasion &amp; Society</td>
<td>35</td>
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<td>Research Methods in Social Psychology</td>
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<td>2221-Spring</td>
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<td>APPM</td>
<td>A-Game for Calculus</td>
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<td>2221-Spring</td>
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<td>ATOC</td>
<td>Our Changing Environment: El Nino, Ozone, and Climate</td>
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<tr>
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<td>Intensive Programming Workshop</td>
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<td>Introduction to Statistics</td>
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<tr>
<td>2221-Spring</td>
<td>PHY 211</td>
<td>FRCC</td>
<td>Calculus-based Physics 1 at FRCC</td>
<td>48</td>
</tr>
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</table>
Appendix B. LA Pedagogy Course Summary

**Course Learning Goals:**
Readings, assignments, class activities, and discussions are designed to help you implement evidence-based learning-centered teaching practices. In particular, during this LA Pedagogy class you will contribute to a supportive learning community and:

- Build knowledge about how you and your students learn.
- Practice listening and questioning, eliciting and responding to student ideas, and engaging students in peer interactions that support learning.
- Develop and practice strategies for facilitating equitable, inclusive, and effective learning environments.
- Reflect on your learning, teaching, and views of effective education.

**Schedule:** Lessons are designed to begin with an opportunity for LAs to bring in their initial ideas and experiences, build upon their initial understanding with engaging curricular materials and by reading pedagogical literature, and then apply and practice these topics/ideas.

- **Lesson 1: What is learning?**
  - Learning Objectives:
    - Reflect on prior experiences related to learning and being in classrooms.
    - Start to consider how internal and external factors impact learning and success in university classrooms.
    - Develop a map or framework that links the aspects of teaching and learning together.
  - **Assigned:** Getting to Know Your Students Survey (due week 4)

- **Lesson 2: Questioning and wait time**
  - Learning Objectives:
    - Explore different ways of asking questions.
    - Become aware of various questioning strategies.
    - Practice designing questions that probe different types of student thinking.
  - **Assigned:** Audio Recording Transcript (due week 6)

- **Lesson 3: Facilitating student-student interactions**
  - Learning Objectives:
    - Describe the qualities of productive student-student interactions.
    - Explain why it is important to provide opportunities for students to work together during the learning process.
    - Develop and practice strategies for facilitating productive student interactions.
    - Become aware that articulating and defending ideas is an important part of the learning process, that knowledge is generated by virtue of discourse.
  - **Reading:** McIntosh, B. B. (2021). Facilitating student-student interactions as a Learning Assistant.

- **Lesson 4: Compassion towards self and others**
  - Learning Objectives:
- Become aware of the idea of self-compassion, that the ways you speak to yourself has measurable impacts, and that you can harness this idea to support your own mental health and that of your students.
- Develop strategies for supporting your own self-compassion.
- Strategize ways that you can support self-compassion among your students.
- Assemble resources that will help you and your students succeed.

- **Lessons 5 and 7: Listening and feedback**
  - **Learning Objectives**:
    - Connect the concepts of compassion, questioning, and wait time to feedback; feedback is only relevant to what the student has said and done, and therefore requires careful listening, wait time, specificity, clarity, and compassion.
    - Practice giving and receiving feedback using the essential elements of effective feedback: listening, focus, specificity, timing, tone, and mode.

- **Lesson 6: Audio recording transcript feedback**
  - **Learning Objectives**:
    - Improve your utilization of pedagogical techniques during student interactions, by:
      - (A) recording a 2-4 minute LA-Student interaction as a concrete tool to examine the ways you interact with students
      - (B) giving and receiving constructive feedback
      - (C) reflecting on your LA practice before and after receiving feedback.
  - **Assign**: Audio Transcript annotation and reflection (due week 7); LA Mentoring Sessions and Observation (must be completed between week 6 and week 12)

- **Lesson 8: Noticing and eliciting student Ideas**
  - **Learning Objectives**:
    - Develop and practice strategies for eliciting and identifying students’ ideas.
    - Recognize that students have a diversity of ideas relevant to a course’s instructional goals--based on their experiences, former instruction, and observations from the real word--and these ideas can be built upon through listening and feedback. Student ideas are useful whether or not they are fully correct.
    - Understand why it is critical that an LA tries to find out what a student thinks at a point in time in relation to a particular academic concept and how this fits into the feedback/formative assessment cycle overall.

- **Lesson 9: Learner-centered teaching**
  - **Learning Objectives**:
    - Explain how learning is a process of integrating new information with prior knowledge to work towards expertise.
    - Practice strategies for helping students build upon their content-related ideas.
    - Describe the roles of teachers, course materials, and students, in effective learning environments.
- Explain how the techniques we focus on in EDUC 4610 are useful for moving students from an initial to final state of understanding.
  - **Assigned:** LA Mid-Semester Feedback Survey (LA-CQs) (due Week 10). Learner-centered transcript analysis (initial draft due week 10).

- **Lesson 10: Learner-centered transcript analysis**
  - **Learning Objective:**
    - Demonstrate your understanding of the underlying pedagogical theory that influences how, when, and why, pedagogical techniques can be used to assist student learning.
  - **Assigned:** Final submission of Learner-centered transcript analysis (due week 11)

- **Lesson 11: Belonging and inclusion**
  - **Learning Objectives:**
    - Become more aware of how the experiences of students from under-served backgrounds may lead to them feeling like they don’t belong in some learning environments.
    - Reflect upon times when you have felt like you don’t belong and how that impacted your motivation and engagement in that context.
    - Develop strategies for including students in the learning community in your own LA-Student Interactions.
  - **Reading & Videos:**
    - Thomas Open Letter (2016): 1.5 page open letter written by a CU student in 2016 about their experiences as a Black student
    - Access ain’t inclusion—12 minute intro to the concept;
    - A Walk in my shoes—watch 2 (~5 min) vignettes

- **Lesson 12: Intended and unintended consequences of education**
  - **Learning Objectives:**
    - Reflect on your experiences as a student and as a teacher to engage in high-level critical thinking associated with the purposes of education.

- **Lesson 13: Self-directed learning**
  - **Learning Objectives:**
    - Understand what metacognition is and its usefulness in empowering students to take control of their own learning.
    - Apply principles of self-directed learning to your own teaching and learning.
  - **Assigned:** LA Poster Session, Friday, December 3, 2021, 3:00 - 6:00 pm

- **Lesson 14: Role of the LA Model**
  - **Learning Objectives:**
    - Understand your potential for impacting students.
    - Describe how the LA Model positively impacts students, LAs, instructors, course-transformation, and education as a whole.
Reflect on how your implementation of pedagogical techniques developed over the course of the semester.

Learn about data supporting the impacts of the LA Model and align these outcomes with your experiences as an LA.

Consider how LAs impact student learning in your LA-Student interactions.

**Lesson 15: Leveraging your LA experience**

- **Learning Objectives:**
  - Describe how the LA program positively impacts students, LAs, instructors, course-transformation, and education as a whole.
  - Reflect on your experiences in the pedagogy class and LA-Student Interactions during the semester.
  - Give feedback to Lead Faculty and LA Pedagogy Course Instructors to improve the experience for future LAs and students.

**Learning Objectives for Assignments:**

- **“Getting to know your students” Survey**
  - Develop questions to help you get to know your students in order to better support their learning.
  - Analyze and present the information collected to help you develop concrete goals for your LA practice throughout the semester.

- **Mid-Semester LA Feedback (LA-CQs) Survey**
  - Develop questions that will give you student feedback about your (pedagogical) approaches to assisting student learning.
  - Analyze and present the information collected to help you develop concrete goals for your LA practice the remainder of the semester.

- **LA Mentor Experience:** You will each be paired with an LA Mentor, who you will meet with on Mondays during weekly POD (Pedagogical Ongoing Development) meetings with fellow LAs. During this in-class time you will discuss the “roses,” positive things about your week, “thorns,” challenges from your week, and any areas of desired help with your Mentor and fellow LAs in your POD. You will get the most out of this time if you spend time reflecting in your **Teaching and Learning Log** prior to Monday class.

  In taking time for weekly reflection we hope that you will:
  - Challenge yourself to continue to try new things and grow in your LA practice throughout the semester.
  - Regularly reflect on observations and experiences from your LA-Student Interactions. Describe struggles, successes, and areas for concern or follow-up.
  - Develop/refine a substantive, specific, and actionable goal each week based on reflections from your student interactions, pedagogy class concepts, and prior goals that will help you to improve how you assist student learning.
  - Reflect on each week’s focal pedagogy concept and how this may impact student learning specific to your discipline. (This will take place in class.)

  Further, at least once during the semester you will be observed by your **LA Mentor** during your LA-Student Interactions (live in-person, recorded remote, or asynchronous, depending on your class). You will meet with your Mentor for **one-on-one Mentoring Sessions** before and after the observation so that you can discuss any challenges you are experiencing and your goals for how you are implementing pedagogical techniques (~2 hours collectively). Your LA Mentor is your
advocate and advisor as you navigate this first semester as an LA -- this is an amazing opportunity!

- **LA Poster Session**
  - Describe how the LA program positively impacts students, LAs, instructors, course-transformation, and education as a whole.
  - Reflect on your experiences in the pedagogy class and LA-Student Interactions during the semester.
  - Give feedback to Lead Faculty and LA Pedagogy Course Instructors to improve the experience for future LAs and students.