A Review of CCC Undergraduate Teaching Assistant (UTA) Guidelines
2020-2021

Background:

Undergraduate Teaching Assistants (UTAs) play an important -- and in some departments, essential -- role in teaching at Brown. Beginning in the late 1990s, the College Curriculum Council (CCC) has periodically reviewed and debated the utilization of UTAs at Brown. Past discussions resulted in a set of CCC Guidelines that were sent to department chairs and directors of undergraduate studies in 2001 and revised and disseminated again in 2009. Much has changed in the decade since the CCC's last review of the University's UTA practices, including an increase in the number of UTAs, driven in part by the sharp growth of UTAs in a single department (the largest employer of undergraduates on campus reached 300 UTAs in a given semester in spring 2019). The 50th anniversary of Brown's philosophy of undergraduate education presented an opportune moment for re-examining this approach to collaborative teaching and learning and to ensure that it reflects current research and best practices.

Process:

A working group comprised of four faculty from the Departments of Computer Science, East Asian Studies, French Studies, and Neuroscience (two of whom were members of the College Curriculum Council), two undergraduates, and two administrators from the College and the Sheridan Center for Teaching and Learning, respectively, met over of the course the Fall 2019 and Spring 2020 semesters to discuss:

> (1) the teaching and learning objectives of the University's UTA program;
> (2) current scholarship about best practices in the field of undergraduate peer education;
> (3) current practices across the over 40 academic units at Brown that employ UTAs; and
> (4) recommendations for improving the efficacy and satisfaction for both UTAs and the undergraduates whom they serve.

Nearing the end of its study, the working group was interrupted by the University's shift to remote instruction, as staff and faculty turned their attention to address the pressing student, teaching, learning, and operational needs that emerged in the wake of the COVID-19 global pandemic.

Working Group Membership:

- Arthur Borém '20, Computer Science
- Tom Doeppner, Computer Science
- Lona Tehrani '21, Hispanic Studies
- Stephanie Ravillon, French Studies
- Besenia Rodriguez, The College (co-chair)

- Christina Smith, Sheridan (co-chair)
- John Stein, Neuroscience
- Kikuko Yamashita, East Asian Studies

Key Questions:

1. What roles and responsibilities do UTAs hold across departments? What expectations do departments have of their UTAs?
2. What are the experiences of UTAs -- as students and as teachers -- within a given course? What resources and support do they receive?
3. How are instructors engaging with UTAs and others within a given course's instructional team? How are UTAs engaging with each other and with students in the course?
4. What are the University's goals and expectations for UTA professional development, support, and learning?
5. What are the University's learning objectives for undergraduate teaching assistants?

Methods:

Students and members of the working group conducted research on how undergraduates work in their roles as peer educators at Brown and across a number of other colleges and universities. At Brown, the group reviewed Fall 2019 data provided by University Human Resources and surveyed staff and instructors in academic departments and programs regarding how they work with UTAs. Topics included recruitment, hiring and training practices, roles and expectations, and supervision. 26 instructors and staff responded from STEM disciplines (e.g. computer science, biology, neuroscience, chemistry) and humanities and social science departments (e.g. East Asian, French, and Hispanic studies). A survey was also sent to students in the Spring of 2020. Topics were similar to those asked of instructors with 20 students responding (sophomore to senior). Overall there is not much consistency across the University in regards to recruitment, hiring, training, and supervision of UTAs. Roles and expectations of UTAs include course design, preparation, facilition, and grading for courses. Based on the surveys, it is unclear how much support and training students receive to help them adequately fulfill their roles, particularly if they are creating artifacts for the course. Other areas of concern include how students are typically recruited (Survey Executive Summary).

In addition, the working group reviewed the findings of two student-driven short-term research projects. Students in the course, "The Theory and Teaching of Problem Solving" (UNIV 1110) conducted a short term research study on the Computer Science (CS) department's UTA program ([Berglund, Borém, & Hinkle, 2019](#)). Through a series of focus group interviews with UTAs and students in CS courses with UTAs (n= 10), the researchers identified the following themes based on the participants' significant experiences:

- Workload and compensation: insufficient compensation and student vs. UTA trade-off
- Efficacy and preparation: variability in UTAs experience/preparation and feeling underprepared
- UTA authority: professorial work and unstructured responsibilities
- Community impact: Value of program and barriers to community creation

Arthur Borém '20 continued this research as part of an Undergraduate Teaching and Research Award (UTRA) in Fall 2019 partly in an effort to inform work for the CCC UTA guidelines committee. He interviewed UTAs from engineering, computer science, and physics (n=5) about their responsibilities, motivations, expectations, and support structures. Additional interviews were planned and cancelled as we transitioned to remote learning (Spring 2020). Using cultural historical activity theory (CHAT) he identified the following tensions UTAs experience ([Borém & Smith, 2020](#)):

- Required tools (e.g. homework solutions) created by professor vs. professor not engaging in responsibilities
- Role of HTAs relative to instructors' role
- Time sensitive student responsibilities vs. time sensitive TA responsibilities
- Responsibility overload vs. students' experience in the course
- Unexpected and challenging responsibilities vs. lack of feedback and structure
- Heavy and complex responsibilities vs. lack of training and infrastructure
- Freedom in experimentation vs. lack of feedback and structure of that experimentation

Finally, the working group reviewed the published information at a range of other colleges and universities to get a sense of how UTAs work with and support undergraduate students as peer educators. This benchmarking revealed that Brown's decentralized practices are common at other colleges and universities, where processes and procedures also vary by academic department or program. There are a variety of roles, responsibilities, pay structures, training, supervision, and guidelines for undergraduates in teaching roles (e.g. peer tutors, learning assistants, fellows, teaching assistants) across these institutions.

Summary of Findings:

UTAs can have a profound impact on the learning of their peers. Overall, our research revealed that UTAs engage in complex teaching practices that are not consistently or equitably supported. Moreover, there are equity gaps in access to UTA opportunities themselves. Data is incomplete because at the time of this research, an estimated 25% of positions were pre-selects rather than posted in the HR system of record (effective January 8, 2021, University Human Resources has implemented a policy that requires all student employment positions to be posted, a shift that will allow for better tracking of applicants and selected students). However, University payroll data suggests that students self-identifying as first-generation college students, students from historically underrepresented groups, and financially aided students are underrepresented among UTAs, while students in other groups -- namely those not from historically underrepresented groups and unaided students, are overrepresented among UTAs. This data is not surprising given that the absence of a single, transparent system for finding, applying to, and securing UTA positions would advantage students with connections to instructors over those who may not have them or who are less knowledgeable about the workings of the University.

Our recommendations included periodic evaluation of UTAs experiences (particularly of those from underserved groups), institutionalized pedagogical development, and a focus on working with instructors and UTAs to create a culture of community and student partnership in teaching and learning. The revised UTA Guidelines reflect these recommendations and serve as a living artifact to continue to prompt conversations between students, UTAs, instructors, and administrators as roles and responsibilities of UTAs change.

Committee Recommendations:

1. *Update UTA Guidelines and Faculty Rules* (see attached).

Last reviewed in 2009, the CCC's Guidelines for Undergraduate Teaching Assistants must be updated to not only align with current research and best practices around undergraduate peer education, but to reflect the curricular landscape at Brown, which has changed dramatically in the past decade. For example, the guidelines, quoting *Faculty Rules and Regulations*, state that required class hours should not be taught by UTAs. However, many departments, in particular language departments, now consider weekly discussion or conversation sessions a required component for successful engagement in a course. Reframing forms of engagement that are often considered optional or "extra help" into embedded and required components of the course is one way to foster a more inclusive classroom experience (Gooblar, 2015; Guerrero and Rod, 2013). Making these sessions mandatory disrupts aspects of the University's "hidden curriculum," making explicit what is required for success in the class, as well as lowering barriers for students

who might, due to systemic reasons (including fear of confirming negative stereotypes about an identity they hold, or the need to work for pay), hesitate to utilize these resources.

Another area for clarification is around UTA grading of student work. The Faculty Rules explicitly state that grading is the exclusive responsibility of instructors; however, the existence of "Course Grader" as an undergraduate student employment position is indicative of ambiguity, at best, and a clear contradiction, at worst. This is another area that has been revised to reflect current practices, while offering some additional guidance and limits.

Second, in light of the disparities and equity gaps referenced above, the subcommittee also urged that the UTA Guidelines speak directly to the goal of equitable hiring practices and provide some best practices in this regard. The January 2021 University shift to require that all student employment opportunities be posted rather than hired via "pre-selects" is an important step in this direction.

Third, drawing on feedback from undergraduate TAs across various disciplines, the proposed UTA Guidelines speak more explicitly to appropriate responsibilities and support for UTAs.

Finally, like other recent updates to the Faculty Rules and Regulations, the revised UTA guidelines replace "faculty" with "instructors" in order to be more inclusive.

2. *Articulate University and Departmental Learning Objectives for UTAs.*

Given the critical role of UTAs in the University's teaching and learning mission, the subcommittee recommends the University articulate learning goals for its UTAs. Transparency around [course learning objectives](#) has been found to "increase students' confidence, sense of belonging, and retention -- with key benefits for first-generation, low-income and underrepresented students." Clear intentions around the knowledge, skills, and capacities that UTAs can be expected to develop could yield similar benefits for students and help guide the support and professional development that both the Sheridan Center and academic departments provide to UTAs. Below are proposed learning objectives that were developed to articulate Brown's intentions for the UTA experience.

Learning Objectives for Undergraduate Teaching Assistants:

- Critically reflect on their teaching practices and inherent biases to support and engage diverse students in the learning process;
- Collaborate with instructors on improving course learning goals and creating equitable teaching and learning environments by giving and receiving critical course feedback;
- Create a community of learners across course TAs, students, and instructors;

- Identify and effectively communicate key concepts in their respective course(s) with students;
- Develop professional skills such as problem solving, critical thinking, ethical conduct, mentorship, and time management;
- Effectively engage with course concepts to enhance their own learning;
- Incorporate teaching and disciplinary skills to their everyday lives.

Additional student learning outcomes will vary depending on the discipline and on the UTA's specific duties and responsibilities. Therefore, we strongly encourage academic units who work with UTAs to develop their own, more focused learning objectives to complement the general learning objectives above. Departmental or course-specific learning objectives may be particularly useful as instructors and departments craft job descriptions and responsibilities. The criteria for assessing UTAs' effectiveness -- either through ongoing (ideally) or end-of-term feedback -- should be clearly linked with the University and departmental learning objectives.

3. *Deepen expectations for professional development, training, and support of UTAs. Require anti-bias and anti-racism training for UTAs.*

While UTAs serve important teaching functions, they are, first and foremost, students. As such, in addition to their compensation, UTAs should be expected to participate in ongoing professional development around pedagogy provided by both the University - through the Sheridan Center for Teaching and Learning - as well as the academic unit, which has expertise around pedagogy within the particular discipline and content areas. This professional development is a necessary component of their effectiveness in their roles. For this and for reasons of equity -- to ensure that all Brown students are able to develop in their capacities as peer educators regardless of level of financial need and obligations -- should therefore be compensated, wherever possible.

As the [Sheridan Center notes](#), "effective teaching is anti-racist teaching." Just as Brown requires training on Title IX, Violence Against Women Act, and the Clery for all professional staff, and all faculty and staff are expected to complete Unconscious Bias training, UTAs should also be expected to complete Unconscious Bias training. At least one department has already implemented such training via an online module. An e-learning module on "Understanding the Impact of Unconscious Bias in a University Setting" was launched in February 20202 by the Office of Institutional Equity and Diversity and University Human Resources, and more investigation should be done to determine whether this existing module could be required of all UTAs as a condition of their service in the role.

6

4. *Ensure that academic units' reports of their UTA programs incorporate UTA best practices*.

Just as the curriculum and advising program of each concentration is reviewed on a regular basis by the College Curriculum Council (CCC), academic units' UTA programs should continue to be assessed with these guidelines and best practices in mind. Since fall 2020, questions about the structure and support for UTAs have been incorporated into the [CCC's Concentration Review Guidelines](#).

Works Consulted:

Berglund, K., Borém, A., & Hinkle, E. (May 14, 2019). A Preliminary Inquiry into the State of the Brown University Computer Science Department's Undergraduate Teaching Assistant Program.

Borem, Arthur, & Smith, C. (2020). *Developing and supporting STEM undergraduate teaching assistants as partners in teaching*. Paper presented at the virtual 2020 Frontiers in Education (FIE) Conference in Uppsala, Sweden.

Brown University Student Employment Payment Categories

Brown University Student Employment Hourly Wage Rates

Brown University Number of UTAs by Department (Fall 2019)

Gooblar, D. (2015). Make Your Office Hours a Requirement. *Chronicle of Higher Education*. https://community.chronicle.com/news/1167-make-your-office-hours-a-requirement

Guerrero, M., & Rod, A.B. (2013). Engaging in Office Hours: A Study of Student-Faculty Interaction and Academic Performance. *Journal of Political Science Education, 9* (4), 403-416.

Invitational Office Hours. (n.d.). Retrieved from https://www.brown.edu/sheridan/invitational-office-hours.

<u>**Appendix A: Proposed UTA Guidelines and Faculty Rules**</u>

GUIDELINES FOR UNDERGRADUATE TEACHING ASSISTANTS (UTAs)

Introduction

Undergraduate Teaching Assistants (UTAs) play an important role in Brown's learning environments. Over half of undergraduates at Brown work as a peer educator before leaving the University. As students, UTAs bring a unique perspective on learning course content and can provide a different level of support for their peers. Ideally, faculty would be working with UTAs as partners and collaborators as a teaching team that leverages UTA experiences as students to design, facilitate, and evaluate course content.

These guidelines were revised to help create a consistent and equitable UTA and student experience while at Brown, an experience where all concerned are dealt with fairly and equally. You are encouraged to discuss the guidelines in an initial meeting with your UTAs to help foster collaboration and ensure that UTAs are engaging effectively in their work. The guidelines were revised using research conducted by UTAs at Brown as well as a committee of instructors, staff, and undergraduates.

Recommended Learning Objectives for Undergraduate Teaching Assistants:[1]

- Critically reflect on their teaching practices and any biases to support and engage all students in the learning process;
- Collaborate with instructors on improving course learning goals and creating equitable teaching and learning environments by giving and receiving critical course feedback;
- Create a community of learners across course TAs, students, and instructors;
- Identify and effectively communicate key concepts in their respective course(s) with students;
- Develop professional skills such as problem solving, critical thinking, ethical conduct, mentorship, and time management;
- Effectively engage with course concepts to enhance their own learning;
- Incorporate teaching and disciplinary skills to their everyday lives.

A. Best Practices for the Equitable Recruiting and Hiring of UTAs:

1. **Develop a clear, transparent hiring process.** In order to ensure fair and equal access to UTA positions, practices for hiring UTAs will be transparent and include a clear and accurate description of expected roles and responsibilities, ideally aligned with the recommended University learning objectives above and the department's learning objectives for UTAs; how students will be chosen to become a UTA; how they will be evaluated and supported; and avenues for addressing any challenges that may arise. It is imperative that all students have an equal opportunity to apply for UTA positions. All

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[1] Instructors and departments may adopt one or more of these learning objectives and are advised to develop their own learning objectives.

positions must be posted in Workday, the University Human Resources system of record, and should be advertised widely among student groups. Students may not work before they have applied and have been formally hired through the Student Employment Office. (Note: If a student will continue in a UTA role in a subsequent term, the position end date may be extended; the position need not be reposted.) Department managers and instructors are encouraged to contact University Human Resources with questions.

2. **Think creatively about the required skill-set.** It is critical that instructors consider multiple factors in hiring, including how prospective UTAs have worked through challenging experiences and content within the course (for example, as opposed to simply reaching out to invite students who earned an "A" in the course to apply); their ability to communicate effectively; and their ability to foster an equitable learning environment.

3. **Advertise posted positions widely.** Relying on word-of-mouth alone is strongly discouraged as it disadvantages students who may have strong qualifications for the position but may have fewer social connections (see Brown's Student Worker Manager training for guidelines as well as the 2019 national research study on on-campus student employment, "Employing Student Success" for additional guidance on equitable hiring processes). Students could be directed to the posted position in Workday through channels such as in class, Today@Brown, Center newsletters (e.g. Brown Center for Students of Color, Curricular Resource Center, Global Brown Center for International Students, Undocumented, First-Generation College and Low Income Student Center, etc.), and Departmental Undergraduate Groups.

4. **Get to know applicants.** Whenever possible, interviews should be incorporated into the hiring process, as they provide instructors with the opportunity to engage more directly with prospective UTAs and allow applicants to elaborate on how their skills and experiences will add to the learning environment. If current TAs will be participating in applicant interviews or other aspects of the hiring process, they should receive guidance and support around hiring best practices. Final decisions about hiring should be made by the instructor and not students.

5. **Notify UTAs promptly.** Once hired, students should be notified of their UTA assignments in a timely manner to allow them to adequately prepare and receive training for their position.

B. UTA Support and Professional Development:

1. Instructors should refer to the UTA Recommended Learning Objectives. In addition, Departments might develop their own as they craft UTA responsibilities and consider feedback and assessment.

2. Ideally, instructors should provide UTAs with written guidelines and expectations for their position before the start of the semester they will work. Guidelines should include an explanation of the UTA's duties and responsibilities (including attendance in course

meetings, office hours, communications with students, etc.), relevant learning objectives, and a workload statement describing the anticipated weekly time commitment.

3. Departments must provide adequate training to make UTAs aware of their responsibilities as teachers, and the power dynamics associated with their role, as well as any relevant departmental and University policies, procedures, rules, and resources. Completion of the [Sheridan Center for Teaching and Learning UTA Orientation](#), available online and asynchronously, or departmental UTA orientations in coordination with the Sheridan Center, should be required for all new UTAs. Time should be allocated, and students should be compensated for time to complete required training.

4. Course instructors should provide consistent support and professional development for UTAs, including regular evaluation of teaching assistant roles and responsibilities; pedagogical development focused on improving teaching, communication, and disciplinary skills; and clear structures for reporting alleged misconduct, grievances, and conflicts (see Sheridan's "[Effective Strategies for Working with Undergraduate TAs](#)").

5. Instructors should arrange and attend regular weekly meetings to clarify course content and expectations (or maintain close communication about these matters with UTAs through other means).

6. Instructors should ensure that UTAs receive feedback from both the course instructor and the students in the class - whether individually or collectively (the student course feedback instrument allows courses or entire departments to add a question about the efficacy of the group of UTAs). Departments must make such feedback available to UTAs at the very least in the end-of-the-term course evaluations.

C. Teaching Responsibilities, including Assessment of Student Work:

1. UTAs should schedule regular office hours to enable students in the class to meet with them easily, either in person or virtually. Departments should make space available for this purpose as needed.

2. The Faculty Rules and Regulations (Part 4, Section 11, Rule II. F.) includes the following policy statement about UTAs:

    a. ~~Evaluation and Grading Evaluation (and hence all grading), is the exclusive responsibility of appointed faculty members.~~ Only instructors may assign final grades. However, UTAs may evaluate and give feedback on student work under the following parameters:
        i. Undergraduate students who have been explicitly hired to grade course assignments will work collaboratively with course instructors on how assignments should be graded to ensure an equitable evaluation of student work.
        ii. Any recommendations on evaluations and grades by undergraduate graders ~~may be appropriate, provided these recommendations are~~ should

be adequately reviewed and judged by the responsible instructors ~~faculty members~~.

    iii. The ~~faculty member~~ instructor should re-evaluate work appraised by undergraduate graders ~~assistants~~ if asked to do so by any student.

    iv. As a general rule, UTAs ~~should~~ may not be asked to grade subjective examinations or papers without extensive faculty oversight.~~, nor should they~~

    v. Where possible, grading should be done anonymously so that the identity of the student being graded is not known to the grader.

    vi. Under no circumstances should UTAs evaluate or, in the case of Head TAs, supervise, the work of friends or family, or others with whom they have a significant relationships; in the event that a UTA learns that they are evaluating the work of a friend or family member, the UTA is expected to recuse themselves from reviewing the student's work and should send assignments to another UTA or to the instructor.

  b. Teaching responsibilities and expectations for full-time enrolled undergraduate teaching assistants (UTAs) should be explicit and should adhere to the College Curriculum Council's Guidelines for Undergraduate Teaching Assistants. ~~The class hours required for any course should not be taught by undergraduate assistants. Supplementary~~ Classes and other kinds of group sessions, ~~such as voluntary discussion sections, or tutorial work, may be~~ taught or facilitated by undergraduate assistants ~~who are~~ must be directly supervised by the instructor ~~faculty member~~ in charge of the course. Such supervision shall usually consist of frequent meetings with the undergraduate assistants to discuss pedagogical matters and/or occasional attendance at discussions led by undergraduate assistants. The direction of laboratory sessions, field trips and projects by undergraduate teaching assistants is permissible, provided such individuals do not bear primary responsibility for any formal instruction. UTAs may be asked to design course components (e.g. assignments or discussion section materials), but such course design must be in collaboration with the course instructor and never the sole responsibility of the UTA. Any course design work must be explicitly included in the UTA's stated responsibilities and must be included in the total hours worked for the purposes of compensation. If there are changes in responsibilities and expectations of UTAs, the course instructor will inform the UTAs in a timely manner.

E. Workload and Compensation:

1. Instructors should ensure that the assignments given to UTAs can be completed in no more than 12 hours per week. Brown students are enthusiastic volunteers and teachers, and UTAs have to find a balance between their teaching and their academic work. Instructors should give UTAs adequate time to complete their TA responsibilities.

2. UTAs hired as student workers must be paid at a reasonable hourly rate (see the Human Resources [website](#) for guidance) and expect to work no more than 12 hours per week in alignment with the Campus Work-Study Guidelines published on the [Office of Financial Aid](#) website. (Note to Department Managers: this expenditure must be reported using the subcode dedicated for undergraduate assistants.)

F. Student Safety and Privacy:

1. UTAs may not be solely responsible for high-risk laboratory experiments (e.g. working with hazardous chemicals, animals, etc.) or other similar exercises without proper training and laboratory supervision.

2. UTAs may also not be involved in the investigation of academic misconduct of fellow students: if a TA suspects another student of being in violation of the Academic Code, they should report this suspicion to the instructor, who will take charge of the matter.

3. In order to protect student privacy, UTAs may not receive, review, or assess student health records or dean's notes. Course [syllabi](#) should provide instructions for students seeking accommodations or flexibility; instructors should reiterate these instructions in class early in the semester.

Appendix B

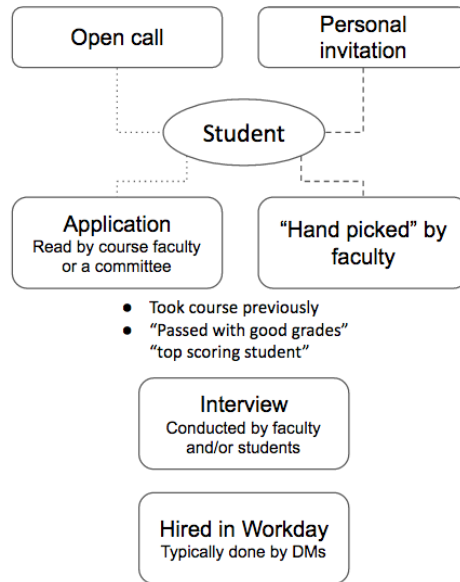## Fall 2019 UTA Departmental Survey

Executive Summary
In the Fall of 2019, managers and directors of undergraduate studies in academic departments that employ UTAs were sent a survey regarding how they work with UTAs. Topics included recruitment, hiring and training practices, roles and expectations, and supervision. 26 instructors and staff responded from STEM (e.g. computer science, biology, neuroscience, chemistry) and humanities and social science departments (e.g. East Asian, French, and Hispanic studies). A second survey was sent to students in the Spring of 2020. Topics were similar to those asked of instructors with 20 students responding (sophomore to senior). Below is a summary of both of these surveys.

Recruitment and Hiring Practices
Instructors (n=20) primarily recruit students individually in-person (65%) or through class-wide emails (60%). Other forms of recruitment include: word of mouth (55%), departmental emails or newsletters (40%), and posting via student employment in Workday (35%). Most departments that responded to the survey described some form of application and interview process, although at least one department described outreach to individual students that had excelled in the course inviting those students to apply for UTA positions. The department that hires the vast majority of UTAs engages in department-wide recruiting and has a competitive process with interviews; selected students are matched with courses that incorporates students' rankings of courses.

Hiring typically occurs the term prior to a student's appointment or within the first weeks of the term. However, it could be up to a year prior to appointment or throughout the course of the term as needed. Hiring is typically initiated by individual course instructors, who will interview and offer the position to students. Department managers may then go through the process of hiring the student. However there are several decision points along the way that vary from department and instructor. See diagram below.

Open call

Personal invitation

Student

Application
Read by course faculty or a committee

"Hand picked" by faculty

- Took course previously
- "Passed with good grades" "top scoring student"

Interview
Conducted by faculty and/or students

Hired in Workday
Typically done by DMs

In regards to why students (n=19) decide to apply to be a TA, the primary reasons were they enjoyed the class or content (68%) and they liked teaching/explaining concepts to students (42%). Other responses included wanting the job experience (26%), to help students or make a personal connection (21%), and for an oncampus job (16%). Creating personal connections, either to the instructor or the content, is an important motivator for students. An example of the importance of connection is provided by this anecdote:

"This was my first and only public/global health class and it really inspired me to pursue opportunities in global health. I loved the lectures and assignments in the course, and at the end of my time as a student, my own TA approached me and asked if I would like to be one next year. She recommended me as a TA to the professor, and he asked me if I'd like to."

Training
Training varies across departments and within departments. Instructors shared that topics covered include: diversity and inclusion; professionalism; laboratory safety; confidentiality, course procedures, responsibilities, and expectations; conducting aspects of their roles; and pedagogy. Only one instructor respondent in biology explicitly identified going over the UTA guidelines prior to the start of the term. If training is offered/expected, it typically occurs prior to or at the beginning of the term. Students (n=20) were asked to agree or disagree with the statement: I received adequate training for the work that was expected of me as a TA. Overall, students agreed with the statement (20% strongly agreed, 55% somewhat agreed) with 25% somewhat disagreeing. Instructors identified the following resources as needed: online training of aspects of their position, employment rights, and recording hours in Workday; a general handbook; diversity, inclusion, and bias training; and funds to pay students to participate in training.

Roles, Expectations, and Compensation

Students worked a range of 3-30 hours/week as a UTA depending on the course and the responsibilities. A conservative average for all student respondents is 8.7 hours/week with instructors stating students work 3-6 hours/week. Expectations and responsibilities include:

- **Course design** - creating homework, section or lecture materials, lesson plans, rubrics, solutions
- **Preparation** - attend course lectures, course meetings, complete course readings
- **Facilitation** - hold office hours; facilitate section, group problem solving sessions, lab; lead test reviews; proctor exams; respond to students through email or Piazza regarding complaints or questions
- **Grade** - homework, tests, and/or quizzes
- **Other** - manage logistics of the course

These expectations and responsibilities vary by course and department. It is unclear if there are consistent expectations across a department. Determination of compensation varies across units also, with instructors citing a pay questionnaire on the student employment site, minimum wage, and guidelines provided by the university as resources they used. Several instructor members also mentioned that decisions around UTAs were driven by budget concerns (e.g. how much they could raise pay, how many UTAs could be hired/term).

Supervision

Instructors indicated that how often instructors meet with their UTAs is course dependent. There was a range from "communicate via email and meet when necessary," "more than once a month, but not weekly" to weekly or "briefly before lecture." There is ambiguity around if UTAs receive feedback about how they are fulfilling their role and what form of feedback it is. For instructors who do provide feedback to their UTAs, it comes in the form of verbal comments or written evaluations informally, or through course evaluations. Instructors are unsure if there is a process in place to have UTAs provide feedback on the structure and effectiveness of the course.

Overall there is not much consistency across the University in regards to recruitment, hiring, training, and supervision of UTAs. Roles and expectations of UTAs include course design, preparation, facilition, and grading for courses. Based on the surveys, it is unclear how much support and training students receive to help them adequately fulfill their roles, particularly if they are creating artifacts for the course. Other areas of concern include how students are typically recruited. If instructors are primarily reaching students through personal connections or by student word of mouth, it may be limiting who is given the opportunity to work as a UTA. Several instructors indicated that students would be hired if they had previous experience in the course, "passed with good grades," or were "top scoring" students. Choosing students who have high scores in the course is a limiting practice because a demonstrated grasp of the material based on a grade doesn't always translate to effective UTA practices. It would be beneficial to broaden the idea of what to look for in a potentially effective UTA. In regards to training and supervision, if we want to develop effective teachers there needs to be some consistency as to how we support UTAs in their work which includes how often they work with the instructor of the course.