

The Institute for Learning and Teaching

GTA Training Task Force



Recommendations

Introduction

The GTA Training Task Force was formed as a key component of the systematic effort to improve CSU Graduate Teaching Assistants' (GTAs') preparation to teach effectively. This endeavor arises in part because CSU is engaged in a focused effort to improve student success, including retention and graduation rates, for all students, including those most at risk as indicated by academic and other factors. Because GTAs provide instruction to approximately 14,000 of CSU's 22,000 undergraduates, they have a substantial impact on undergraduates' educational experiences. Even in departments that employ few GTAs, these instructors often teach, grade, or otherwise facilitate learning for many undergraduates. Indeed, the use of GTAs makes possible smaller class sizes, active learning in labs, more detailed feedback on submitted work, and the like. Further, GTAs typically teach undergraduates who require the most instructor involvement and pedagogical expertise – first and early year students with little or no disciplinary knowledge or experience in University-level courses and transfer students adjusting to the demands of a four year institution. Finally, part of CSU's mission as a research institution entails equipping GTAs not only with disciplinary knowledge but also with training in effective teaching approaches. Therefore, it is essential to the success of both CSU undergraduates and GTAs themselves that the University provide training and information about teaching to GTAs.

While some GTAs entering the university join departments that already run excellent GTA training programs, many other GTAs arrive at CSU with little or no training in how to teach effectively and little conceptual understanding of their role within the University's teaching mission. In addition, as new arrivals at CSU, they are unfamiliar with the resources available to support them, as students and instructors, and to support their undergraduate students. Further, they need information on CSU systems related to education, such as the Canvas Learning Management System, and on complex policies and procedures relevant to teaching, such as course grading practices, academic misconduct, how to comply with the Family Educational Rights and Privacy Act (FERPA), mandatory reporting related to Title IX violations or when to contact Campus Security or Student Case Management for assistance. Potential inconsistencies and lack of completeness in quality and level of training and in communication of University-wide policies and procedures is a very real concern. The CSU Committee on Teaching and Learning brought many of the above-listed issues to the Council of Deans and the Provost for discussion in 2014. The ensuing conversations prompted some of the systemic changes mentioned above and contributed to the formation of this Task Force.

At the current time (Spring, 2015), the Task Force found significant variation in the level of GTA training programs. While many departments already provide extensive, high-quality training in teaching to GTAs, others provide little or no training. Moreover, the aspects of training related to University-wide policies, procedures, and resources vary significantly. This established the need for the University to systematically address the issue of GTA training.

The training and preparation of GTAs requires a partnership between the University, colleges, and departments. The University is best equipped to deliver information about procedures and policies that affect all teaching, across departments and programs. Departments are best equipped to provide information and training about effective teaching in their disciplines. Moreover, departments should be provided significant University resources in order to develop, operate, and assess discipline-specific GTA training programs.

The administration has responded to the University-wide responsibility for GTA training by developing a one-day pre-fall semester GTA training session that is aimed at all graduate students teaching for the first time, including both newly admitted and returning graduate students. This session builds on the orientation offered to new GTAs over the previous two decades. That orientation offered extensive training, most of which is integrated into the new version. The major factors distinguishing the new orientation include an emphasis on the use of active learning approaches in the delivery of content and skills knowledge, as well as the fact that GTAs will be required to attend. The new orientation will be offered for the first time in August 2015. Plans for this University-wide GTA training program are described below.

Discipline-specific training is crucial to effectively equipping GTAs to teach effectively. Findings from research on learning and instructional effectiveness and practices developed through experience in university teaching must be tailored to disciplinary content and implemented in ways that align with disciplinary expectations for the construction and dissemination of knowledge. Further, GTAs must be informed of departmental policies, procedures, and expectations, as well as guided in implementing departmental curricula and norms for interacting with undergraduate students. Finally, disciplinary faculty members serve as GTAs' most important models of good teaching and mentors for developing as instructors here at CSU and within the discipline as a teaching professional. Therefore discipline-specific teacher training is the key component for preparing GTAs to provide effective instruction.

The variations in departmental GTA training programs and in departmental resources available for constructing or improving such programs suggests that departments may benefit from University-level support in this area. Specifically, departments without GTA training programs need to develop them, and some departments with minimal programs need to expand their offerings. In general, both departments needing to develop, expand, or revise their GTA training programs and departments that already have extensive training programs may find that access to suggestions, recommendations, and resources makes the process easier, quicker, and more successful. Moreover, the organization of training programs is a dynamic process that can benefit from an exchange of ideas and experiences.

In light of these points, the GTA Training Task Force was convened in Spring 2015. The Task Force was charged with developing a comprehensive set of recommendations CSU departments can use to design training programs that will prepare GTAs to teach effectively.

Overview of Recommendations

Recommendation 1: The all-University GTA training program should provide GTAs with teaching-related information and materials relevant to all disciplines.

Recommendation 2: Departments and/or colleges should provide GTAs with discipline-specific training in appropriate teaching methods.

Recommendation 3: TILT should provide resources to support departmental and college GTA training programs.

Recommendation 4: The University GTA Training should be coordinated with department and/or college training programs.

Recommendation 5: Departments should systematically evaluate GTAs' performance by developing assessments tightly linked to training programs that provide GTAs the resources to improve teaching.

Recommendation 6: The Graduate School and TILT should form a committee to conduct annual reviews and updates of the models, examples, and other resource materials provided on the TILT Web site to support departments in developing and improving GTA training programs.

Recommendation 7: TILT should designate some Curriculum Redesign awards for departments developing or revising GTA training programs and should continue its GTA Training Certificate Program, which offers experienced GTAs to modes of learning and different approaches to effective teaching, and it should expand this program to provide all graduate students and post-doctoral researchers the opportunity to participate.

Recommendation 8: The Graduate School, INTO CSU, and the Office of International Programs should form a working group to assess whether there is a need for additional support in developing proficiency in spoken English for GTAs who are non-native speakers.

Recommendation 1: Provide Information and Materials Relevant to All Disciplines through the All-University GTA Training

The University GTA Training will provide materials and information relevant to all disciplines, including information on CSU students broadly, the GTA role, background on CSU's teaching mission, information on learning, some aspects of classroom

management, academic integrity, the University's learning management system, resources for students and instructors, and University policies and procedures. As part of this process, the University GTA Training will use active learning in order to seed the idea that there can be different approaches to effective instruction, without providing didactic instruction in related pedagogical strategies. While planning for the 2015 University GTA Training was nearly completed by the time this Task Force began meeting, the Task Force recommends that the following list of proposed topics typically be covered in this training. (All of these topics will be covered in the 2015 training.)

Proposed Topics:

- Demographic and other information describing who CSU students are and its implications for instruction
- Background on CSU's teaching mission and structure: how GTAs support the university mission and the scope of their participation in instruction at CSU, with an emphasis on the need for professionalism
- GTAs' roles representing CSU and the need to balance research and teaching responsibilities
- How students learn: discussion of different learning styles, including active and passive learning strategies, with emphasis on exposure to different strategies. (The University training will cover this topic broadly and then the department could cover this in the context of their content)
- Class management (some aspects covered in the university training, some in trainings by individual units), including disruptive conduct or other concerning behavior
- Syllabus, including components essential to a syllabus in any discipline, the syllabus elements required by the Colorado Higher Learning Commission, and the function of the syllabus as a contract between an academic department and students
- Modes and consistency of communication with students, both individually and collectively
- Canvas/LMS use
- Academic integrity, including an introduction to the Office of Integrity
- Resources to support student success, health resources for students
- Resources with further information regarding University policies and procedures, e.g., FERPA, Conflict Resolution, Mandatory reporting information re: Title IX violations, campus security
- Dealing with health or other emergencies, ideally by providing both instruction and scenarios to which GTAs must respond
- CSU/TILT resources available to support further teaching development

Suggested Future Development:

- Investigate which elements are common across successful departmental GTA training programs and cover any that are not discipline-specific in the University Training
- Survey GTAs regarding perceived benefits resulting from University training

Rationale for University Training

The requirement that all GTAs attend the University training ensures that they will receive authoritative explanations of FERPA, sexual harassment policies, ethical issues they may encounter, dealing with difficult students, and the like. This approach decreases the risk that departmental presentations on such issues may not conform to University policy.

Recommendation 2: Departments and/or Colleges Should Provide GTAs with Discipline-Specific Training in Appropriate Teaching Methods

Learning to teach effectively requires substantial disciplinary expertise, which determines how best to implement particular pedagogical approaches and information on how people learn. Because departments need to provide discipline-specific instruction in such strategies, that work will be done in college- or department-level GTA training programs, which are essential to preparing GTAs to function effectively in instructional roles, whether they assist faculty or hold primary responsibility for a course. In addition to providing training in how to teach, departments/units should list, clearly and explicitly, specific expectations for GTAs and departmental procedures for intervention in cases where expectations are not met.

In most cases, departments should undertake this training. However, in cases where a college has a small number of GTAs from various allied departments, it may be more effective for colleges or individual instructors to develop and implement GTA training programs.

A range of approaches will likely be needed to address the various topics departmental trainings must address. Demonstration of various delivery modes built into the activities is important. The following topics should be covered, with materials provided to GTAs as noted:

- Course-specific resources for each course taught by GTAs: content, quizzes, homework to be assigned, and a profile of the course itself and the students typically enrolled, including expectations for students and projected grading distribution. Some departments may wish to emphasize ensuring that GTAs do not need to design course materials and instead can focus on helping students to learn, while others may train GTAs to design some course materials, such as quizzes, exams, lectures, PowerPoints, handouts, in-class activities, exercises, and the like. In all cases, departments should indicate clearly which materials are standardized across sections and to be used by all GTAs, such as common textbooks, review sheets, final exams, and grading rubrics, and which materials GTAs may develop individually.
- Students as learners, with a focus on varying levels of content knowledge and other preparation, learning styles, needs, and interests and an emphasis on the need to present material in ways that can be grasped by students with different learning styles (e.g., verbal, visual, kinesthetic), as well as encouragement to recognize and reflect on the GTA's own learning style and its relation to his/her instructional style
- Information and resources related to various pedagogical approaches, including online and offline resources where GTAs can share their uses of these strategies

- and their teaching experiences with one another; (departments may choose to develop their own or to direct GTAs to use materials on the TILT site)
- Class management strategies not covered in the University training, particularly when department-specific (e.g., in relation to large lecture courses vs. small discussion sections)
 - Discussion of how general teaching policies and procedures (FERPA, sexual harassment, etc.) discussed in University GTA Orientation materialize in meaningful ways in specific departmental courses and GTA tasks.
 - Disciplinary safety-related issues
 - General information on departmental expectations, policies, procedures, and practices, including consequences for not meeting expectations related to any aspect of GTA role; departments could ask GTAs to sign a document listing expectations of them, specific to their roles (e.g., whether or not they hold primary teaching responsibility; in cases when expectations are not met, written documentation can be circulated to GTAs' research supervisors, course coordinators, and other relevant faculty or administrators, which some departments have found improves GTAs' performance

Please see the appendices to this report and the TILT Web site for the following resources intended to support departments and other units in developing GTA training programs:

- A list of possible training formats and approaches to be chosen based on best fit with disciplinary and unit needs
- A set of heuristic questions for determining which formats and approaches may be most effective, given departmental/unit needs
- A matrix of various training approaches' advantages/disadvantages
- A flow chart of key decision-making criteria for choosing appropriate training approaches and structures

Recommendation 3: TILT Should Provide Resources to Support Departmental and College GTA Training Programs

TILT should provide resources for both department faculty members responsible for training GTAs and for GTAs themselves, including the following materials:

- Models of training materials and procedures, described at a fairly general level, with the expectation that interested readers may contact a department whose materials are of interest; such materials will be posted with the proviso that those who use them explicitly acknowledge the source of the materials in printed, online, or orally presented versions
- Accessible descriptions of pedagogical approaches, with concrete examples of how approaches are used in a classroom setting and information on where to access additional resources. Include articles from publications such as *Inside Higher Ed*, *The Chronicle of Higher Education*, and *The Teaching Professor*, as well as video examples of instructors using various pedagogical approaches
- These materials should be organized in a Canvas site to ensure that they are accessible only to faculty, rather than undergraduates. This site should be managed by TILT and the Graduate School with materials featured in it reviewed

annually and updated if appropriate. Prefatory material should emphasize that departments may choose to modify sample approaches based on factors such as number of GTAs working with a faculty mentor, how the faculty-GTA relationship is structured, and the type of GTA assignment (grader, instructor of a stand-alone section, etc.). Materials should be divided into three categories, with a focus on Category #1 first and future development of materials from Categories #2 and #3, perhaps simultaneously, to meet departments' specific needs. All departments should develop materials in Categories #1 and #2, while whether and to what extent a department develops materials in Category #3 will depend upon disciplinary needs, student goals, and the like.

- Category #1: Foundational materials, procedures, and practices for departments building new GTA training programs, such as statements of behavioral expectations for GTAs and consequences for failing to meet these expectations (e.g., a decrease in the GTA's grade in Supervised College Teaching) and plans for a departmental GTA orientation. All departments should develop their own versions of these materials, procedures, and practices, adapted as appropriate to the specific nature of GTAs' positions and relationships with faculty mentors.
 - Category #2: More in-depth materials, procedures, and practices for departments extending their programs, such as guidelines and rubrics to be used in evaluating GTAs' teaching. All departments should eventually develop their own versions of these materials, procedures, and practices, adapted to departmental needs, but this development might best begin after one to two years of developing and refining Category #1 materials.
 - Category #3: Materials designed to support GTAs' development as teachers, such as. Examples might include explanations of how to create an effective learning environment, materials used to introduce GTAs to various pedagogical approaches, and explanations and samples of teaching philosophy statements. All departments should provide generalized examples of such materials to their GTAs and should adapt them as appropriate to disciplinary needs.
- Resources for instructor self-assessment and ongoing reflection
 - Information and links related to student and instructor resources, e.g., Canvas, CASA, Conflict Resolution, CSU Health Network, EHS, peer-support networks, FERPA, support for students with disabilities, at-risk training, sexual harassment training, and an indication of which support staff are willing to present information to classes
 - Explanation of the information that must be included in any syllabus
 - Videotaped Student Affairs presentation on CSU, a short commentary on the high impact GTAs can have on students (even in one comment or conversation), and material on inclusivity
 - Information on TILT professional development workshops particularly tailored to GTAs' needs
 - A structure and process for building a community of educators that connects GTAs across disciplines to one another (e.g., meetings once per term, an online discussion board), which will be particularly useful for GTAs from departments that provide less extensive support

- TILT and the Graduate School should consider offering a January GTA Training session for GTAs who begin teaching during the Spring semester
- TILT and OnlinePlus should consider working with Human Resources to develop a more interactive set of trainings for working with at-risk students and avoiding sexual harassment

Recommendation 4: University GTA Training Should Be Coordinated with Department and/or College Training Programs

To effectively develop and implement departmental and/or college GTA training programs and coordinate them with the University training program, several forms of communication will be required. The first involves providing more specific information to department heads and faculty coordinating GTAs regarding the need for training, in cases where such information may be helpful. It would be useful for the Vice Provost for Faculty Affairs to devote one or two of the ongoing regular meetings with department heads to a discussion of what information, materials, and resources the University GTA Training Program will provide and what corresponding materials departments and/or colleges should provide.

Department chairs and administrative assistants should receive periodic information on the University GTA Training Program and should be invited to designate other faculty who should receive the information.

All faculty who work with GTAs and other relevant departmental and college administrators should be invited to the University GTA Training so they will be familiar with the material covered and prepared to build effectively on it in departmental and college training programs.

Recommendation 5: Departments should systematically evaluate GTAs' performance by developing assessments tightly linked to training programs that provide GTAs the resources to improve teaching.

A TILT Task Force on Assessing Teaching Effectiveness that also met during the Spring 2015 term has produced a comparable report that presents summaries of research on various methods of assessing teaching effectiveness and that provides detailed descriptions of such methods, as well as relevant resources. This report and related resources are posted on the TILT Web site provide useful resources for faculty, administrators, and others seeking information on how to assess teaching effectiveness.

Recommendation 6: The Graduate School and TILT should form a committee to conduct annual reviews and updates of resource materials.

To ensure that the models, examples, and other resource materials provided on the TILT Web site to support departments in developing and improving GTA training programs are regularly reviewed for accuracy, relevance, and usefulness, the Graduate School

and TILT should form a committee to conduct annual reviews and to ensure that materials are updated as needed.

Recommendation 7: TILT should designate some Curriculum Redesign awards for departments developing or revising GTA training programs, should continue its GTA Teaching Certificate Program, and should expand this program to provide all graduate students and post-doctoral researchers the opportunity to participate.

TILT should modify its new Curriculum Redesign Initiative, which provides support to departments in identifying and redesigning up to three key courses that play an important role in the curriculum, to ensure that a proportion of curriculum redesign projects entail developing or revising a GTA training program. Further, TILT should continue its existing GTA Teaching Certificate Program, which introduces experienced GTAs to modes of learning and different approaches to effective teaching. Because this program currently serves only GTAs, TILT should expand the program to include interested graduate students and post-doctoral researchers. Further, TILT should revise its promotion of this program to make professional development activities more inviting to prospective participants by emphasizing the fact that graduate students are welcome to participate in as few or as many activities as desired and do not need to commit to pursuing the certificate to take part in its individual components.

Rationale

On the basis of this exposure to different ways of teaching, GTAs can begin to consider the options available to them, both at CSU and in the future. Additionally, GTAs can also begin to consider how their students may learn most effectively in response to information on different learning and teaching styles. Individual departments can build on the University training's introduction to these topics as desired.

Recommendation 8: The Graduate School, INTO CSU, and the Office of International Programs should form a working group to assess whether there is a need for additional support in developing proficiency in spoken English for GTAs who are non-native speakers.

Approximately 10 – 12% of CSU GTAs (averaging 91 per semester in AY 2014-15) are non-native speakers of English. Task Force members have heard repeated reports that the current TOEFL requirement does not adequately evaluate the proficiency in spoken English of GTAs who are non-native speakers. This circumstance may negatively impact the learning of undergraduates receiving instruction from GTAs who lack sufficient English language proficiency and may impair teacher-student relationships. Therefore, the Graduate School, INTO CSU, and the Office of International Programs should form a working group to assess whether these GTAs need additional resources to help them develop this proficiency and, if so, what kinds of resources would be most appropriate. This committee might also consider what resources might be brought to bear to assist all GTAs in modifying teaching styles to assist non-native speakers of English in their classrooms.

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Appendix A: Possible GTA Training Formats and Approaches

Department- or college-specific trainings might use one or more of these formats and approaches, as determined by the best fit with disciplinary and unit needs:

- Pre-semester training sessions, ranging from one to five days, possibly moving from general to specific and from group activities to individual meetings between GTAs and instructors of record, as appropriate for specific units
- Conducting an initial assessment of GTAs' preparation for teaching and need for teaching-related support, with special attention paid to familiarity with the course content, presentational skills, and English-language proficiency.
- Design and implement an active assessment process that spans the first semester of GTAs' teaching and that may include guidelines and suggestions for faculty assessing GTAs' instructional work, with guidelines keyed to the type of instruction being offered (e.g., as a lab coordinator, recitation leader, or instructor of record); guidelines should include suggestions for eliciting and using feedback from GTAs' undergraduate students; assessment may include faculty review of GTAs' grades and plans for addressing any grading patterns outside the expected norm for the course in question
- Direction of GTAs' instructional responsibilities by a GTA Coordinator and/or Graduate Director
- Weekly debriefing sessions in which GTAs report on their teaching and receive feedback from a faculty mentor
- Paired interactions between a senior GTA or full-time lecturer mentor and each new GTA
- Use a Canvas site to make materials, communications, and interactive structures available to GTAs and to track their engagement with materials and interactions
- Facilitated online interactions among GTAs
- Recommended or required peer observations in which GTAs observe other senior instructors' teaching
- A one- to two-credit practicum taken by GTAs during their first semester of teaching
- A full graduate course taken by GTAs during their first semester of teaching
- Recommendation that GTAs attend TILT Professional Development Institute (PDI)
- End-of-semester written self-assessments in which GTAs report which aspects of instruction went well, which they would change, and why
- Consider assigning international GTAs to roles according to proficiency in spoken English, for instance asking those who need time to develop such proficiency to begin their GTA tenure as graders and, when ready, to move to leading recitation sections and/or instructing stand-alone sections; help international GTAs access resources for improving their spoken English

Appendix B: Heuristic Questions for Determining which Training Formats and Approaches Best Meet Department/Unit Needs

Questions to consider in choosing GTA training formats and approaches:

- What is the departmental or college culture around GTA training?
- What ethos do faculty and GTAs hold toward teaching?
- Does the department have an evaluation process for each type of teaching assigned to GTAs?
- Does the department's training program structure provide GTAs with the opportunity to fail as part of learning to teach, with active feedback on how to work effectively with failure?
- Does the department provide a structure to inculcate career-long habits of reflective teaching?
- Does the department require GTAs to enroll in supervised college teaching credits? Would this be beneficial for GTAs' future professional endeavors? Or might it detract from other aspects of professional preparation?
- Does the department have an initial assessment process to determine what teaching preparation GTAs already have and what preparation they need?
- Does the department provide GTAs with a list of criteria for satisfactory performance?

Appendix C: Matrix of Various Training Approaches' Advantages/Disadvantages

Approach	Advantages	Disadvantages
Pre-semester training sessions	Communicates departmental expectations, policies, and procedures to GTAs before they begin teaching Promotes confidence as GTAs enter the classroom Develops a cohort of graduate teachers who can reinforce ideal practices, values, and ideas	Requires GTAs to commit pre-semester time Requires initial and possibly ongoing investment of department faculty/staff time to plan and implement Potential conflicts with other beginning of the semester activities
Initial assessment of GTAs' teaching preparation and training needs	Provides information to better tailor GTA training to existing needs	Requires either in the moment pivots to address needs or advanced preparation to adequately measure needs and proscribe effective training
Active semester-long assessment of GTAs' instructional performance	Provides opportunities for ongoing formative feedback, rather than	Requires ongoing investment of faculty time through either:

	<p>focusing primarily on summative end-of-semester feedback</p> <p>Provides early warning in any cases of serious problems</p> <p>Produces a culture of reflection and self-reflection on teaching excellence</p>	<ul style="list-style-type: none"> • The designation of a single faculty member to conduct all assessments • Or a willingness among the entire faculty to complete a small number of assessments
<p>Direction of GTAs' instructional responsibilities by GTA Coordinator or Graduate Director</p>	<p>Provide a formal structure for communicating with GTAs about their teaching and directing their development as instructors</p>	<p>Requires allocation of departmental resources (teaching re-assignment and/or stipend)</p> <p>Requires training of or hiring of individual with pedagogical and management expertise</p>

<p>Active semester-long assessment of GTAs' instructional performance</p>	<p>Provides opportunities for ongoing formative feedback, rather than focusing primarily on summative end-of-semester feedback</p> <p>Provides early warning in any cases of serious problems</p> <p>Produces a culture of reflection and self-reflection on teaching excellence</p>	<p>Requires ongoing investment of faculty time through either:</p> <ul style="list-style-type: none"> • The designation of a single faculty member to conduct all assessments • Or a willingness among the entire faculty to complete a small number of assessments
<p>Direction of GTAs' instructional responsibilities by GTA Coordinator or Graduate Director</p>	<p>Provide a formal structure for communicating with GTAs about their teaching and directing their development as instructors</p>	<p>Requires allocation of departmental resources (teaching re-assignment and/or stipend)</p> <p>Requires training of or hiring of individual with pedagogical and management expertise</p>
<p>GTA weekly debriefings with faculty mentor or senior GTA mentor</p>	<p>Provides safe environment for generative discussion with peers and mentor and for formative feedback to encourage experimentation and learning about effective teaching approaches</p>	<p>Requires investment of faculty time, departmental resources</p>
<p>Pairing GTAs with senior GTA or lecturer mentor</p>	<p>Provides a mentoring relationship likely to encourage GTAs to share anxieties and concerns</p>	<p>Requires departmental resources for design and implementation</p> <p>Requires strict guidelines</p>

	more freely than they might with tenure-track faculty mentors; provides professional development opportunity for senior GTA or lecturer mentors	and oversight to protect time and prevent exploitation of non-TT faculty/senior GTA mentor
Using Canvas to provide training materials and track GTA engagement	Makes collection and updating of training materials manageable; enables tracking of GTAs' engagement with materials for assessment and mentoring purposes	Requires updating of GTAs' and others' access to site each semester
GTA peer teaching observations	Provides opportunities for modeling from peers rather than established experts; distributes workload	Can potentially lead to the modeling of counterproductive teaching styles amongst unexperienced teachers
One- to two-credit teaching practicum	May benefit GTAs when they seek employment Provides documentation on the transcript	Requires commitment of faculty instructional time May be perceived as reducing GTAs' time for other studies
Graduate-level teaching seminar	May benefit GTAs when they seek employment Provides ongoing, regular basis for education, assessment, and pedagogical problem-solving	Requires substantial commitment of faculty instructional time May be perceived as reducing GTAs' time for other studies
GTA attendance at relevant PDI sessions	May extend departmental training programs in chosen topic areas Can contribute to hours need for TILT Certificate	Requires small investment of departmental resources to notify GTAs of PDI and encourage them to attend; Might benefits from department members leading particular sessions as needed
End-of-semester written self-assessment	Promotes the habit of reflection on teaching and provides GTAs with materials to serve as the basis of job search materials (e.g., cover letter on teaching experience, teaching philosophy statement)	Requires investment of faculty time to coordinate assignment and review of self-assessment
Assignment of international GTAs based on	Improves clarity of communication for	Requires investment of departmental resources;

assessment of proficiency in spoken English and coordination of access to University resources for second-language speakers	undergraduate students; provides GTAs with appropriate scaffolding in learning to teach in English	can be perceived as limiting opportunities for the development of all GTAs equally
Encourage attendance of pedagogical-themed events at disciplinary conferences, events, etc.	Expands opportunities for GTA training beyond the interests/capabilities of CSU department; provides networking opportunities for GTAs	May require commitment of department funds for GTA travel/participation

Appendix D: Flow Chart of Key Decision-Making Criteria for Choosing Appropriate Training Topics and Structures

Knowledge and Skills Required for All GTA Roles (Grader, Recitation Leader, Lab Assistant, Instructor of Record)

- Creating grading rubrics
- Grading fairly and equitably
- Dealing with grade disputes
- Checking grade distribution against distributions of other teaching assistants
- Determining the validity of multiple choice questions
- Knowing FERPA rules
- Understanding course expectations

Additional Knowledge and Skills Required for Recitation Leaders, Laboratory Assistants, and Instructors of Record

- Creating an inclusive classroom environment
- Encouraging class participation
- Leading class discussions
- Learning alternatives to lecture
- Making effective use of classroom technology
- Understanding emergency response protocols
- Knowing what to do if a student passes out or suffers some other medical or mental health emergency

Additional Knowledge and Skills Required for Laboratory Assistants

- Understanding laboratory safety procedures
- Knowing how all laboratory equipment operates and relevant safety procedures
- Understanding how to deal with student accidents

Additional Knowledge and Skills Required for Instructors of record

- Creating an effective syllabus
- Knowing instructors' responsibilities for students with disabilities
- Knowing how to address concerns that a student may injure self or others