Program Review and Assessment
2019-2020

Prepared By: Center for Teaching Excellence (CTE):
Graduate Student Professional Development in Teaching Programming

Prepared For: Office of Graduate and Professional Studies,
Texas A&M University

May 2020
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Executive Summary

A wide variety of specialized trainings and professional learning experiences are provided by the Center for Teaching Excellence (CTE) Graduate Student Professional Development in Teaching (GSPDT) Programs. These trainings and professional learning experiences are intended to help graduate and professional students improve their pedagogical skills. GSPDT Programs seek to promote experiences in teaching, both complementing and exceeding departmental initiatives, which provide transferable skills that bridge the gap between course work and the professional career choices of graduate students. GSPDT Programs benefit graduate and professional students, and postdoctoral research associates, and support departments and colleges in providing an outstanding educational experience for students.

The 2019-2020 Program Review and Assessment (PRA): CTE Graduate Student Professional Development in Teaching Programming provides an overview of the Center’s programs and services and describes program performance and impact. The programs featured in the PRA include: Teaching Assistant Institute (TAI); Academy for Future Faculty (AFF); Graduate Student Professional Development in Teaching (GSPDT) Workshop Series; Graduate Teaching Consultant (GTC); Teaching-as-Research (TAR).

Teaching Assistant Institute (TAI): A goal of the CTE is to “create and facilitate professional development that promotes excellence in teaching and learning aligned with student success as evidenced by new faculty and Teaching Assistants (TAs) confident and effective in their teaching...”. The TAI allows the Center to meet the training needs of TAs in a variety of departments across campus, simultaneously. In AY 2019-2020 more than 900 new teaching assistants from 10 colleges and professional schools across campus attended the Institute. Using a combination of plenary and breakout sessions, new Teaching Assistants discussed 6 core topics: university policy; educational technology; nature of learning; teaching strategies; communication skills; and classroom management. These topics are essential to development in their assigned roles as full-responsibility instructors, recitation leaders, and laboratory. (Core topics were underpinned by themes of diversity and inclusion and active learning.) Providing an overall evaluation of the Institute, nearly 85% of new teaching assistants rated their experience as either “excellent” or “good”. Teaching Assistants expressed moderate to high levels of confidence with respect to their ability to identify strategies for building and maintaining classroom communication after having engaged in the Institute. For additional information, please see the section Teaching Assistant Institute.
**Academy for Future Faculty (AFF):** One of the oldest GSPDT Programs, AFF provides graduate students, professional students, and postdoctoral research associates with the opportunity to enhance their skills and knowledge related to college classroom teaching through collaborative study, expertise exchange, and professional dialogue. AY 2019-2020 more than 160 participants completed the program earning the CIRTL-Associate Level certificate. (CIRTL certificate levels can be found at https://drive.google.com/file/d/0B58hs1OIPq66dEZQZy10enV4MkE/view.) The number of US Residents and International Students engaging in the program are nearly equal in number. The program includes both Doctoral and Masters-level students from over 10 colleges and professional schools on two campuses, TAMU and TAMU-Galveston. Following a cohort of 378 newly enrolled program participants in the Fall of 2018, several things can be understood about how students progress through the two-year AFF certificate program. About 15% of newly enrolled students complete the AFF certificate program in one year, instead of two years. Approximately 1 out of 3 students complete the AFF certificate program within the recommended two years. While the AFF certificate program is designed as a two-year program, students are not removed from the program after two years. We hope that continued analysis of the Fall 2018 cohort will continue to help us understand how students progress through the AFF certificate program. Program requirements can be found at http://cte.tamu.edu/Graduate-Student-Support/AFF/certificate-program. For additional information please visit the section Academy for Future Faculty.

**Graduate Student Professional Development in Teaching (GSPDT) Workshop Series:** The GSPDT Workshop Series, based on customization, permits individual departments and students to meet their specific goals pertaining to training in pedagogy. This is in contrast to the TAI which meets the general training needs of TAs in a variety of departments simultaneously across campus. In AY 2019-2020 over 31 unique workshops totaling 2,100 minutes of professional development were hosted by the GSPDT Workshop Series and Academy for Future Faculty. (Note: AFF workshops are open to graduate and professional students and post-doctoral research associates. Attendees do not need to be a member of the AFF Certificate Program to attend a workshop.) The GSPDT Workshop Series and Academy for Future Faculty program boasted a combined attendance of nearly 1,500 students on two campuses, TAMU and TAMU-Galveston. See the section Graduate Student Professional Development in Teaching (GSPDT) Workshop Series for additional information.

**Graduate Teaching Consultant (GTC):** The GTC program allows the Center for Teaching Excellence (CTE) to extend its reach, addressing the pedagogical needs of teaching assistants (TAs) on campus. Serving in a majority of departments across various colleges, TAs help to educate undergraduate students by ensuring they engage with course content according to course learning outcomes; support faculty in the facilitation of in-class learning activities; oversee laboratory exercises and studio projects; and provide assessment support in the preparation of exam questions and item grading.
The important and varied roles of TAs continue to necessitate the employment of the GTC program. GTCs provide pedagogical support to TAs through individual and small group consultation on a variety of teaching and learning topics; teaching workshops; and classroom observation and feedback services. In AY 2019-2020, thirteen new GTCs were onboarded following a nomination and interview process and a half day orientation. Collectively, GTCs contributed over 185 hours of mentor support to new teaching assistants during six sessions of the Teaching Assistant Institute (TAI). (More than 900 new TAs attended the TAI in AY 2019-2020.) In an effort to ensure student, teaching assistant, and faculty success during the COVID-19 Pandemic, GTCs supported Instructional Consultants in the facilitation of training to help faculty and teaching assistants make a transition to online teaching. Following the first wave of the Keep Teaching initiative (https://keepteaching.tamu.edu/), GTCs' support of faculty and teaching assistants making the transition to online teaching continued in their involvement with the Center’s Virtual Office Hours (http://cte.tamu.edu/) via the video communications cloud platform, ZOOM. Reflecting on their experiences in the program for AY 2019-2020, GTCs recommended that the current signup process for client requests be reviewed for equal accessibility between all GTCs. In addition, GTCs expressed a desire for increased interaction with their peers. GTCs found engagement in the program personally beneficial: disclosing formerly hidden aspects of “scholarship in higher education”, enabling the improvement of professional documents, such as the teaching statement, and enhancing marketability through the honing of teaching and essential skills. Please see the section Graduate Teaching Consultants for additional information.

**Teaching-as-Research (TAR):** TAR Fellows conduct research on college teaching by collaborating with a faculty mentor within their discipline to plan and implement a research project. In AY 2019-2020, eight doctoral students from 3 colleges, Agriculture and Life Sciences, Engineering, and Geosciences engaged in the year-long capstone CIRTL program. Classroom research conducted by the fellows ranged from the use of virtual reality technology to enhance student motivation in the classroom to the effects of implicit bias on leadership practices in the classroom. For more information, please visit the section Teaching-as-Research Fellows.
Introduction

In collaboration with the Office of Graduate and Professional Studies (OGAPS), the Center for Teaching Excellence (CTE) supports the professional development in teaching of graduate students at Texas A&M University. Multiple studies conducted by individuals and organizations such as the Association of American Colleges and Universities (AAC&U) assert that research training alone is not enough to prepare graduate students for the professoriate. (Please see AAC&U (2010) for a historical review.) In response, the CTE offers a variety of programs and services to support both early and advanced stages of graduate students’ professional skill development in teaching and learning.

The 2019-2020 Program Review and Assessment (PRA): CTE Graduate Student Professional Development in Teaching Programming provides an overview of the Center’s programs and services and describes program performance and impact. The programs featured in the PRA include: Teaching Assistant Institute (TAI); Academy for Future Faculty (AFF); Graduate Student Professional Development in Teaching (GSPDT) Workshop Series; Graduate Teaching Consultant (GTC); and Teaching-as-Research (TAR). This suite of programs and services provided by the Center supporting graduate students, professional students, and postdoctoral research associates, hereafter referred to as Graduate Student Professional Development in Teaching (GSPDT) Programs, align with the Texas A&M University: An Ideal 21st Century University Vision Strategic Goal Alignment and CTE Mission Goals as outlined in the Center for Teaching Excellence Strategic Alignment. GSPDT Programs also support the 2015-2020 OGAPS Strategic Goal to “enhance the graduate experiences and development of all graduate and professional students, personally and professionally”.

Texas A&M University: An Ideal 21st Century University – Goal 1: Provide an outstanding educational experience for all students.

2015-2020 OGAPS Strategic Plan – Goal 2: Enhance the graduate experiences and development of all graduate and professional students, personally and professionally.

Center for Teaching Excellence Strategic Alignment: CTE Mission Goals – Goal 1: New faculty and teaching assistants confident and effective in their teaching early in career.

Goal 6: Graduates entering into academia competent in teaching skills and therefore more competitive.
The following are Essential Skills addressed by one or more Graduate Student Professional Development in Teaching Programs.

### ACADEMIC PROFESSIONALISM
- Demonstrating classroom etiquette
- Complying with University rules and policies
- Upholding course commitments and class meeting deadlines
- Maintaining positive relationships with other colleagues (e.g., course instructor, Teaching Assistants) and undergraduate students
- Contributing to the dissemination and facilitation of discipline knowledge
- Contributing to overarching institutional goals pertaining to classroom teaching and learning

### COMMUNICATION
- Basic writing and editing for various mediums
- Speaking clearly and effectively
- Presenting disciplinary content
- Teaching in a classroom setting
- Training and mentoring undergraduate students
- Seeking advice from course instructors, advisors, mentors, and peers
- Negotiating difficult conversations

### MANAGEMENT AND LEADERSHIP
- Providing instruction and guidance
- Providing constructive feedback
- Dealing with conflict in the classroom setting
- Planning and organizing projects related to course instruction
- Time management
- Managing data and resources
- Leading and motivating others
- Creating goals and learning outcomes

### EDUCATIONAL RESEARCH SKILLS
- Experimental design in educational research
- Interpretation of classroom data
- Creativity/innovative thinking
- Classroom assessment practices
- Navigating the peer review process in educational research

Adapted from myIDP Science Careers at https://myidp.sciencecareers.org/
Impact Statements

- The Teaching Assistant Institute was hosted on three campuses- TAMU, TAMU-Galveston, and The TAMU School of Law.

- Over 900 (944) new Teaching Assistants attended the Teaching Assistant Institute where they discussed evidence-based practices in teaching and learning to enhance their classroom instruction as recitation leaders, laboratory instructors, and full-responsibility lecturers.

- An additional elective workshop was added to the TAI curriculum to better address the pedagogy needs of more than 900 new Teaching Assistants.

- Following a nomination and interview process, thirteen graduate students were admitted into the Graduate Teaching Consultants (GTC) program.

- Graduate Teaching Consultants engaged in over 200 hours of invited presentations and workshops.

- Over seven days, GTCs contributed 40 hours of consultation services to faculty and graduate students transitioning their courses to an online platform in response to the COVID-19 pandemic.

- Over 35 hours of professional development in teaching workshops were made available to graduate students, professional students and post-doctoral research associates by the Graduate Students Professional Development in Teaching (GSPDT) Workshop Series and the Academy for Future Faculty.

- Academy for Future Faculty and the GSPDT Workshop Series facilitated synchronous and asynchronous programming to support the need of distance students and students at TAMU-Galveston.

- In collaboration with the Larry J. Ringer Library and multiple STEM departments, the GSPDT program organized 6 off-campus community-based science talks allowing graduate students to engage in advanced teaching practices and build essential skills.

- Over 160 students completed the AFF Certificate Program.

- Consultants (GTCs) supported multiple departments and programs across campus providing 46 hours of general professional development in teaching presentations impacting over 650 graduate students, professional students, and postdoctoral research associates.
The Teaching Assistant Institute (TAI) is a university-mandated TA Training Program that supports new TAs in their assignments as lecturers, lab instructors, and recitation leaders for their departments. This one-day training program provides new TAs the opportunity to clarify, question, and apply information comprising foundational principles in teaching and learning. The TAI can be expected to continue to (1) support the TATEP mandate in providing appropriate and timely training for new TAs at Texas A&M, (2) provide a practical training model with relevant content, and accessible resources supporting new TAs in their positions, and (3) extend training and resources to graduate students at other system schools such as Texas A&M Galveston and the Texas A&M School of Law in Fort Worth.

Based on a review of the practices of our peer institutions, learning research (Ambrose, Bridges, DiPietro, Lovett, & Norman, 2010), the work of Austin and McDaniels (2006), and customizing to our local university needs, six core and six elective topical areas were identified for the TAI. These themes can be seen on the following page.
## Core Topical Areas

### University Policy
- Make classroom decisions following University policies (i.e., FERPA, VAWA, Title IX, Concealed Carry, ADA)
- Identify University resources to support their role as teaching assistants

### Educational Technology
- Identify terminology and features relevant to basic class management within a Learning Management System (i.e., eCampus)

### How Learning Occurs
- Determine the connection between learning outcomes and assessment
- Determine a plan for self-assessment including evaluating effectiveness of performance as a TA

### Teaching Strategies
- Choose appropriate teaching strategies to achieve learning outcomes
- Select appropriate delivery methods (videos, interactive technologies, lecture, etc.)

### Communication Skills
- Utilize effective public speaking skills
- Determine appropriate processes and methods for communicating with students

### Classroom Management
- Prepare guidelines that communicate course expectations
- Identify strategies for addressing classroom incivilities (e.g., talking out of turn, cheating, aggressive behaviors) and situational context

## Module Themes

### Diversity and Inclusion
- Construct a personal definition of diversity
- Explain the value of accounting for diverse perspectives in the classroom
- Describe strategies that facilitate an inclusive learning environment

### Active Learning
- Construct a personal definition of active learning
- Discuss several active learning strategies supporting student engagement in the classroom

## Elective Topical Areas

### Advanced Educational Technology
- Evaluate if or how well web 2.0 tools can be used to meet course learning outcomes

### Application of Teaching Strategies
- Discuss the application of teaching strategies
- Demonstrate multiple teaching strategies

### Self-reflection for Instructors
- Select a process to reflect on their teaching assignment/role

### Grading
- Identify faculty member’s grading expectations
- Identify methods for increasing grading fairness, accuracy, and consistency
- Identify strategies for efficient grading
- Identify a plan for handling grade disputes

### Communication Strategies for International Instructors
- Discuss expectations of teachers and students
- Apply functional language techniques for leading a classroom discussion
- Identify active learning strategies to be used in the classroom

### Metacognition
- Discuss the components of metacognition
- Identify active learning strategies to master course content
Teaching Assistant Institute 2019-2020

Participant's Overall Evaluation of TAI (N = 277)

- Nearly 1 out of 3 respondents rated the Teaching Assistant Institute as excellent.
- Over 1/2 of respondents rated the Teaching Assistant Institute as good.

Participant's Previous Exposure to TAI Content (N = 277)

- Over 2/5 of respondents indicated that they had not been exposed to the material presented at TAI.
- Less than 1/3 of respondents reported having been exposed to material presented at TAI.
Participants’ response to "Can you incorporate concepts learned during TA Training into your work as a TA immediately?" (N = 277)

- Over 1 out of 3 respondents felt that they could incorporate concepts learned at TAI into their work immediately.
- Over 2/5 of respondents felt that they could incorporate much of what they learned at TAI into their work immediately.

Participants’ response to "Rate how confident you are that you have the ability to..." (N = 88)

- Identify some strategies for building and maintaining classroom communication:
  - Very: 34%
  - Some: 41%
  - Only Some: 21%
  - Not at All: 4%

- Define important factors for intercultural adjustment:
  - Very: 34%
  - Some: 41%
  - Only Some: 21%
  - Not at All: 4%

- Identify some characteristics of effective teaching in the U.S.:
  - Very: 34%
  - Some: 41%
  - Only Some: 21%
  - Not at All: 4%

- Identify some factors in effective communication:
  - Very: 34%
  - Some: 41%
  - Only Some: 21%
  - Not at All: 4%

- Create a personal narrative that I can use during the first day of class:
  - Very: 34%
  - Some: 41%
  - Only Some: 21%
  - Not at All: 4%
What did you like most about the TAI programming and explain why.

<table>
<thead>
<tr>
<th>statements</th>
<th>reasons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grading. Gives effective methods and tools for us.</td>
<td></td>
</tr>
<tr>
<td>It was very informative.</td>
<td></td>
</tr>
<tr>
<td>The methods of how to be a better teacher.</td>
<td></td>
</tr>
<tr>
<td>The Title IX and Academic Integrity presentations were very important, and</td>
<td>I know how to approach the class safely with those things in mind.</td>
</tr>
<tr>
<td>I know how to approach the class safely with those things in mind.</td>
<td></td>
</tr>
<tr>
<td>Based on the TA training, I could design my future class by using</td>
<td>I enjoyed the people who spoke during the breakout sessions. They were honest with their experiences and became relatable to the group.</td>
</tr>
<tr>
<td>interesting learning materials.</td>
<td></td>
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<tr>
<td>Tips and tricks on how to handle different situations involving students.</td>
<td></td>
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<tr>
<td>The importance of student participation in class.</td>
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<tr>
<td>That it was comprehensive.</td>
<td></td>
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<tr>
<td>I got to connect with a couple of people with related interests.</td>
<td></td>
</tr>
<tr>
<td>I really liked the part that informed us about the do's and don'ts as a</td>
<td>I enjoyed the people who spoke during the breakout sessions. They were honest with their experiences and became relatable to the group.</td>
</tr>
<tr>
<td>TA. That made things a lot more clear.</td>
<td></td>
</tr>
<tr>
<td>Alessandra, one of my facilitators, was amazing! Loved her energy and</td>
<td></td>
</tr>
<tr>
<td>bicultural approach to teaching!</td>
<td></td>
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<tr>
<td>Again, my instructors for the assigned breakout sessions were amazing.</td>
<td></td>
</tr>
<tr>
<td>Ciana Scaletti and Andrew Garcia</td>
<td></td>
</tr>
<tr>
<td>Good topics</td>
<td></td>
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<tr>
<td>The smaller sessions provided a chance to ask more questions and get</td>
<td></td>
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<tr>
<td>important answers from other TAs.</td>
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<tr>
<td>I liked the breakout sessions because they allowed us to have group</td>
<td></td>
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<tr>
<td>discussion and they were more engaging and interactive.</td>
<td></td>
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<tr>
<td>Teaching strategies was the most interesting because it elucidated the</td>
<td></td>
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<tr>
<td>diversity of ways that humans learn and comprehend information.</td>
<td></td>
</tr>
<tr>
<td>General techniques to achieve the best possible delivery of material and</td>
<td></td>
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<tr>
<td>strategies which would enhance learning and applicability of delivered</td>
<td></td>
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<tr>
<td>instruction.</td>
<td></td>
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<tr>
<td>Knowing the boundary of employee and student.</td>
<td></td>
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<tr>
<td>I enjoyed the people who spoke during the breakout sessions. They were</td>
<td></td>
</tr>
<tr>
<td>honest with their experiences and became relatable to the group.</td>
<td></td>
</tr>
<tr>
<td>The breakout sessions because the topics that we reviewed are applicable</td>
<td></td>
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<tr>
<td>to the classes and also the instructors were very good.</td>
<td></td>
</tr>
<tr>
<td>Breakout sessions</td>
<td></td>
</tr>
<tr>
<td>Strategies were applicable.</td>
<td></td>
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<tr>
<td>It is informative</td>
<td></td>
</tr>
<tr>
<td>The large group sessions as they gave information pertinent to University</td>
<td></td>
</tr>
<tr>
<td>policy and services</td>
<td></td>
</tr>
<tr>
<td>Some useful techniques</td>
<td></td>
</tr>
<tr>
<td>The break-out sessions because we were able to have open discussions</td>
<td></td>
</tr>
<tr>
<td>about being a TA.</td>
<td></td>
</tr>
<tr>
<td>Grading, because it's very important.</td>
<td></td>
</tr>
</tbody>
</table>

*Selected statements are representative of the variety of responses provided.*
Program Description

The Academy for Future Faculty (AFF) supported by the Office of Graduate and Professional Studies and the Center for Teaching Excellence offers a variety of seminars, workshops, and activities supporting professional development in teaching, research, and service.

Program participants seeking the AFF-Center for the Integration of Research, Teaching and Learning (CIRTL) Associate Certificate attend four required and four elective seminars, complete drafts of professional documents including a syllabus, statement of teaching philosophy, and CV. Documents are reviewed by mentors selected by the program participants. Participants are encouraged to meet with their mentor several times over the academic year to discuss the development of their professional documents and, in addition, topics raised during the seminars. Lastly, program participants seeking the AFF-CIRTL Associate Certificate are required to conduct two classroom observations.

AFF seminars range in duration of length from 60-90 minutes and are facilitated by members of the faculty, instructional staff, and Graduate Teaching Consultants (peer mentors). Seminar topics are diverse and change each semester. Core seminar topics relate to the preparation of professional documents and are repeated each semester.

Program participants are required to attend each core seminar once as part of the eligibility for the AFF-CIRTL Associate Certificate. Core seminars include Learning Outcomes and the Course Development Cycle, Syllabus Design, Philosophy of Teaching Statement, and Curriculum Vitae.

Please see the following page for a listing of AFF workshops for AY 2019-2020.
AFF Graduation Rate since Fall 2018

- New Enrollment: 378
- Graduation: 57 (15%), 50 (13%)

AFF participant's involvement in other programs

- Before Fall 2018 (N = 83): 82
- 2018-2019 (N = 81): 51, 10, 3, 16, 1
- 2019-2020 (N = 34): 15, 2, 14, 3

Participants by College (N=378)

- Engineering
- Agriculture
- Liberal Arts
- Education
- Other
- Mays
- Public Health
- Architecture
- Interdisciplinary Geosciences
- Bush School
- Vet Med
- Science
- Post-Doctoral
- Master's Program
- Ph.D. Program
- Non-Degree Seeking Professional Program
- Other
Participants by College (N=582)

- Agriculture (Ag)
- Architecture
- Bush School
- Education
- Engineering
- Geosciences
- Liberal Arts
- Mays
- Public Health
- Vet Med
- Interdisciplinary
- Other

Certificate Recipients by College (N=167)

- Vet Med
- Science
- Education
- Architecture
- Other
- Ag

Participants by Race

- African American
- Asian
- Multiracial
- White
- Hispanic/Latino
- Other

Participants by Status

- Ph.D. Program
- Master's Program
- Post-Doctoral
- Non-Degree Seeking
- Professional Program

Participants by Citizenship

- U.S. Resident
- International Student

Approximately 582 students impacted

"Better than a thousand days of diligent study is one day with a great teacher"
-Japanese Proverb
In your opinion, how successful was the seminar in addressing its intended topic? (N = 56)

- Over 1/2 of respondents felt that the Working With Students With Disabilities seminar was extremely successful.
- Over 2/5 of respondents felt that the Working With Students With Disabilities seminar was successful.

Please rate your level of understanding and confidence in explaining this seminars teaching focus? (N = 56)

- Nearly 2/5 of respondents indicated having an extremely high understanding of the seminars teaching focus.
- Over 1/2 of respondents reported having a fairly high level of understanding of the seminars teaching focus.

- 53% Extremely Successful
- 45% Successful
- 2% Somewhat Successful
- 2% Unsuccessful
In your opinion, how successful was the seminar in addressing its intended topic? (N = 84)

- Extremely Successful: 2%
- Successful: 17%
- Somewhat Successful: 22%
- Unsuccessful: 59%

Nearly 3/5 of respondents felt that the Teaching Philosophy seminar was successful in addressing its intended topic.

Approximately 1/5 of respondents felt that the Teaching Philosophy seminar was extremely successful in addressing its intended topic.

Please rate your level of understanding and confidence in explaining this seminar's teaching focus? (N = 84)

- Extremely High: 52%
- Fairly High: 31%
- Moderate: 14%
- Low: 3%
- Very Low: 0%

Over 1/2 of respondents reported having a fairly high level of understanding of the seminar's teaching focus.

Nearly 1/5 of respondents indicated having an extremely high understanding of the seminar's teaching focus.
<table>
<thead>
<tr>
<th>Semester</th>
<th>Program</th>
<th>Name</th>
<th>Date</th>
<th>Attendees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer 2019</td>
<td>GSPDT</td>
<td>Increasing Engagement and Comprehension of Assigned Class Readings</td>
<td>June 3, 2019</td>
<td>29</td>
</tr>
<tr>
<td>Summer 2019</td>
<td>GSPDT</td>
<td>Troubleshooting Course Materials to Enhance Equity in the Classroom</td>
<td>July 25, 2019</td>
<td>26</td>
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<tr>
<td>Fall 2019</td>
<td>AFF</td>
<td>Learning Outcomes &amp; the Course Development Cycle</td>
<td>September 9, 2019</td>
<td>92</td>
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<tr>
<td>Fall 2019</td>
<td>GSPDT</td>
<td>Bloom’s Taxonomy and Assessment</td>
<td>September 12, 2019</td>
<td>25</td>
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<tr>
<td>Fall 2019</td>
<td>GSPDT</td>
<td>Increasing Engagement and Comprehension of Assigned Class Readings</td>
<td>September 17, 2019</td>
<td>23</td>
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<td>Fall 2019</td>
<td>GSPDT</td>
<td>Aggie Honor System, Part 1: Plagiarism, Multiple Submissions, and VoR</td>
<td>September 18, 2019</td>
<td>8</td>
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<td>Fall 2019</td>
<td>AFF</td>
<td>Introduction to Copyright for Educators</td>
<td>September 19, 2019</td>
<td>93</td>
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<tr>
<td>Fall 2019</td>
<td>AFF</td>
<td>Connecting with Gen Z: Teaching Today’s Students</td>
<td>September 23, 2019</td>
<td>100</td>
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<tr>
<td>Fall 2019</td>
<td>AFF</td>
<td>Diverse University—Teaching in a Diverse Classroom</td>
<td>October 3, 2019</td>
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<tr>
<td>Fall 2019</td>
<td>AFF</td>
<td>Developing a Teaching Philosophy</td>
<td>October 7, 2019</td>
<td>104</td>
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<td>Fall 2019</td>
<td>GSPDT</td>
<td>Aggie Honor System, Part 2: Cheating, Fabrication, and VoR</td>
<td>October 11, 2019</td>
<td>14</td>
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<tr>
<td>Fall 2019</td>
<td>AFF</td>
<td>Curriculum Vitae</td>
<td>October 14, 2019</td>
<td>85</td>
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<tr>
<td>Fall 2019</td>
<td>GSPDT</td>
<td>An Introduction to College Teaching, Part 1 (Online)</td>
<td>October 22, 2019</td>
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<td>Fall 2019</td>
<td>AFF</td>
<td>Micro-Teaching</td>
<td>November 7, 2019</td>
<td>33</td>
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<tr>
<td>Fall 2019</td>
<td>AFF</td>
<td>Micro-Teaching</td>
<td>November 11, 2019</td>
<td>27</td>
</tr>
<tr>
<td>Fall 2019</td>
<td>GSPDT</td>
<td>Troubleshooting Course Materials to Enhance Equity in the Classroom</td>
<td>November 15, 2019</td>
<td>26</td>
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<td>Fall 2019</td>
<td>GSPDT</td>
<td>An Introduction to College Teaching, Part 2 (Online)</td>
<td>November 19, 2019</td>
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<td>Spring 2020</td>
<td>AFF</td>
<td>Learning Outcomes &amp; the Course Development Cycle</td>
<td>January 27, 2020</td>
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<td>Spring 2020</td>
<td>AFF</td>
<td>Overview of Aggie Research Program</td>
<td>January 30, 2020</td>
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<td>Learning Outcomes &amp; the Course Development Cycle (Online)</td>
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<td>Metacognition (Online)</td>
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<td>Aggie Honor System: How to reduce inside and outside classroom cheating?</td>
<td>February 10, 2020</td>
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<td>Developing a Teaching Philosophy (Online)</td>
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<td>Encouraging Discussion in the Classroom</td>
<td>February 25, 2020</td>
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<td>Micro-Teaching</td>
<td>March 2, 2020</td>
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<td>March 5, 2020</td>
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<td>Spring 2020</td>
<td>GSPDT</td>
<td>Creating a Syllabus (Online)</td>
<td>March 15, 2020</td>
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Program Description
The Graduate Teaching Consultant (GTC) Program supports the professional development of teaching assistants (TAs), and includes opportunities that support enhanced teaching experiences. Graduate Teaching Consultants are experienced teaching assistants exhibiting pedagogical skills and knowledge within their disciplines. GTCs, under the supervision of the Center for Teaching Excellence (CTE), serve as instructional coaches and peer mentors to TAs across campus. GTCs are available to conduct classroom observations, deliver department-wide seminars and workshops for teaching assistants on various instructional topics, and to assist graduate students in the development and preparation of a teaching philosophy statement.

Participants by College (N=15)

Participants by Race (N=15)

Instructional Hours

<table>
<thead>
<tr>
<th>Session Type</th>
<th>Fall 2019</th>
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<tbody>
<tr>
<td>Teaching Assistant Institute Sessions</td>
<td>130</td>
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<tr>
<td>Academy for Future Faculty Sessions</td>
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<td>11</td>
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<tr>
<td>Invited Presentations/Workshops (General)</td>
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<td>127</td>
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<tr>
<td>English Language Proficiency Consultations</td>
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<td>Zoom Meetings</td>
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<td>40</td>
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<tr>
<td>Total Hours</td>
<td>224</td>
<td>250</td>
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85% of Graduate Teaching Consultants feel that they have benefitted professionally, academically, and personally from the program.

93.8% of Graduate Teaching Consultants believe the GTC program has helped them to develop a deeper understanding of research-based teaching practice.

97.8% of Graduate Teaching Consultants agree that they are a more effective teacher in their discipline and can communicate their ideas in innovative manners.
The Teaching as Research (TAR) Fellows Program allows graduate students to conduct research on college teaching by collaborating with a faculty mentor within their discipline to plan and implement a research project. Students have the opportunity to implement a Level 1 ($300 stipend awarded) or Level 2 ($750 stipend awarded) project, with the expectation that students completing a Level 2 project will disseminate their findings via a journal publication and/or poster presentation following the completion of their study. Students are accepted to the TAR program on an annual basis, with new cohorts being formed each summer.
Project Abstracts

Project 1:
We use data analytics regarding students' academic performance and frequent feedback about class/laboratory instruction to improve intervention strategies for struggling students. The course instructor(s) and teaching assistants (TAs) would implement these intervention strategies. Data analytics can help to reduce drop-out rates from the course, academic program, or from the university, if intervention strategies are implemented early on (before the first midterm) to recognize early signs of students struggling in introductory courses of computer science/engineering (CSE). While the data analytics tools for self-reflection are provided to all students of the course, we would only collect information about students who choose to share their information with the course instructor(s) and TAs (i.e., the treatment group). For the treatment group, I would acquire data about students' academic performance and weekly feedback about class/laboratory instruction, and analyze and visualize such data on a weekly basis that is shared with the instructors. Instructors can use these information to modify their teaching strategies to improve student learning outcomes. By tracking the teaching strategies used in the intervention of academic struggles, and continuous monitoring of students' performance, we can determine if intervention strategies are successful.

Project 2:
In meteorology, fundamental concepts taught at the introductory level are often misunderstood. Current teaching practices often rely on the traditional technique of lecture-based teaching, but perhaps incorporating different teaching/learning methods could help address this issue. In hopes to improve comprehension, this study assesses four different teaching/learning strategies, including think-pair-share/peer instruction (interactive instruction), role-playing (interactive instruction), games (experiential learning) and lecture (direct instruction), through review sessions in an introductory meteorology class at Texas A&M University. Each session is randomly assigned a different method, but all taught by the same lecturer. Each method is assessed through pre- and post-session surveys as well as pre- and post-course feedback.
Previous studies suggest that active and experiential learning will likely be more effective than the traditional teaching method of lecture-based learning. Because students in meteorology are often so passionate for the subject, students thrive when they learn from each other through techniques like think-pair-share and peer instruction. This study hopes to find and improve on new ways of teaching to ultimately enhance undergraduate education, specifically at the introductory level.
Project Abstracts

Project 3:
The research hypothesis of demonstration of a lab concept followed by discussions can help the learning to be more enjoyable, relatable and retainable for students, will be tested using assessment strategies like pre-lecture material, group learning/participation during demo and discussion, post-lecture quiz, and a reflection survey. The survey sought will be open-ended to evaluate how much the students learned compared to a traditional lecture. It will be targeted to find out how enjoyable the experience was for the students if they could retain the information after the lecture, and if they could apply it to everyday engineering applications. To help the students relate to the concepts for an engineering course, a demo with real-life applications of the circuit/device such as a microcontroller will be introduced in the lectures. A flipped classroom approach will be utilized, where material for pre-reading will be provided to the students so that they can come to the class prepared beforehand. The concepts will be refreshed in the lecture and combined with a demo. The lecture will be classroom styled and interactive in nature where direct teaching will be integrated with interactive and experiential techniques. It will be operated with an energy-shift principle where students will be asked to brainstorm on different applications, relate it to their research or products in market (eg. Fitbit) and help them to learn from the instructor as well as each other. This will help them to establish connections with each other while interacting and engaging with the content of the lecture.

Project 4:
An instructor’s role goes beyond developing content knowledge. Faculty and staff who help students see potential in themselves—that may have otherwise gone unnoticed—are typically more effective at empowering students to improve their confidence and competence throughout their courses. Investigating students' self-efficacy scores related to pursuing career endeavors will help instructors develop curricula to focus on a holistic, learning experience.

Our project is studying the self-efficacy development in the advanced agricultural publications course (AGCJ 405) in Fall and Spring 2019. AGCJ 405 is treated similar to an entry-level position where students’ grades are reflected by their personal assessment of their work ethic and their peers’ evaluation of their contribution to the final magazine product. We used a nested and convergent, mixed methods design to compare students’ self-efficacy scores prior to and after the course to quantitatively assess how students develop throughout the semester.

Concurrently, we gathered qualitative statements from students reflecting on their confidence and competence levels before and after the course. Investigating students' self-efficacy scores and statements will valuable feedback for improving student learning. The study may also yield feedback for improving teaching strategies and input to help develop future communication courses that focus on career readiness.
Project Abstracts

Project 5:
Effect of Peer Mentor Interaction on Non-Cognitive Factors in First Year Students

With the continued emphasis on retention, persistence, and student success in higher education, including Texas A&M University’s (TAMU) recent foray into the First Year Experience Pilot of Hullaballoo U, more research is needed to determine whether involving peer mentors in educational experiences and assignments provides the optimal learning outcome for the student. As such, the purpose of this research study will be to examine the effects of peer mentors on collaborating with first year students to determine if their involvement in student groups affects individual and/or group non-cognitive growth and development. This quasi-experimental study will compare participant pre-and post-test assessments on a non-cognitive instrument after a treatment.

Project 6:
Self-assessment is considered an important tool in learning, both for students as well as for teachers. However, much of the current research in self-assessment focuses on students assessing how much they have learned not what they are doing to learn better. This project focuses on the use of surveys to assess learning practices. In order to measure whether self-assessment of learning practices improves learning, students would be required to answer a weekly survey. Students will be asked to keep records of: 1. How much time they dedicate to the course? 2. How is the time split up – daily, weekly, before exams? 3. Do they read outside of assigned material? 4. What techniques do they use to study before an exam? And other questions that provide an overview of student’s practices. After a milestone e.g. an exam, students will be asked to synthesize their practices, record whether they achieved the expected outcome (good grade) and suggest a modification to apply for next milestone. The objective of this learning journal is for the students to become aware of what works for them in terms of learning. This project is targeted for freshmen students, preferably in a STEM field but not required. A problem many professors encounter is helping recent high school graduates get out of the habit of “studying for the test” and “last minute memorizing”. By targeting freshmen students, we will encourage proper learning techniques for the rest of their learning future. Results from this research would not only benefit the students but also the instructor.
**Project 7:**
Virtual Reality (VR) technology is being used in materials science and engineering education to immerse the students in a virtual environment through 3-dimensional visualization and audio narration. The use of VR as a supplement to traditional lecture slides can enhance student interest in the field of materials and improve their learning. To test this hypothesis, a study was conducted in introductory materials science and engineering course for undergraduate students in Spring 2019 semester. In this class session, students were given an initial slides-based lecture followed by a VR lecture. In general, there was a positive response from students about learning through VR platform and they valued the ability to learn the concept in-depth and from different points of view using VR. Some students felt that the 360-video in VR allowed them to really immerse themselves into the concept, which is different from showing them a video on the computer screen. While VR may not completely replace the slides-based lecture, it can provide tremendous opportunity for teaching specific concepts in detail. Based on student feedback, VR could be used as a deep learning tool for concepts that are visually complex in the materials science and engineering classrooms.

**Project 8:**
Leadership involves people. Whether they are the ones leading or being led, the process of leadership involves human interaction. However, not all leadership is effective. Research shows the quality of those human interactions, or relationships, impacts leadership outcomes. Implicit bias has been found to influence how we view people, and the paradigms we hold about subcultures. Thus, implicit bias is present in our exchanges with others and has an effect on our leadership practice. It is important that people in leadership positions, or aspire to be, are aware of how the biases they hold influences their leadership. Implicit bias does appear in leadership literature. However, the focus is more on the affects and consequences, and not as much on its role in leadership education. Thus, this study seeks to add to this area of research.
Teaching as Research Program 2019-2020

Sample Poster Presentations & Research Papers

Detecting Bias: Using Hayakawa-Lowry News Bias Categories to Teach Objectivity in Agricultural Media Writing

Objectivity is the lynchpin in media writing.

Method
To track identifying and quantifying objectivity in media writing:
2. Explain the value of limiting bias in hard news writing and introduce the Hayakawa-Lowry News Bias Categories (Lowry, 1959) as a content analysis method.
3. Have students examine news articles covering local agricultural issues from multiple local newspapers.
4. Instruct students to use the 10 codes to analyze each sentence in the articles (Always look at the side of objectivity).
5. Discuss codes and assign a reflective essay assignment where students describe the value of limiting bias in their personal writing as they prepare to write their first hard news article for the course.

Conclusion & Recommendations
- Having a tool or metric for students to learn to write objectively is valuable.
- Students can recognize bias in personal writing.
- This assignment is used as an assignment at the beginning of a “Objectivity in Hard News Writing” unit.
- After introducing the Hayakawa-Lowry News Bias Categories, encourage students to revisit previous assignments and code their writing.
- Instructors should discuss about writing based language when covering issues to identify additional strategies to write more objectively.

Communication Teacher

Limiting bias: Using Hayakawa-Lowry news bias categories to teach objectivity in hard news media writing

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Sample Poster Presentations

What Instruction Method Enhances Understanding of Fundamental Concepts in an Introductory Meteorology Course?

Montana Ettner-Robin and Don Conlee
Dept. of Atmospheric Sciences, Texas A&M University

Motivation

In meteorology, fundamental concepts taught in the introductory level are often misunderstood. Classroom lectures often rely on the traditional lecture-based teaching methods, but perhaps one of the most important factors that can improve understanding is to incorporate different teaching methods that can enhance the learning experience. This study was designed to compare four different teaching methods through sample sessions in an introductory meteorology class at Texas A&M University.

Methods

Four different methods were compared: Lecture, Lecture and Discussion, Lecture and Demonstration, and Lecture and Experiment. Each method was taught by the same instructor and the same content was covered.

Student Performance

Students were given a pre- and post-test at each session. The pre-test was given to gauge the baseline understanding of the course material. The post-test was given to assess the students' understanding of the concepts taught.

Student Assessment

Students were asked to rate their understanding of the material using a scale of 1-5. Overall, the students felt that the lecture and demonstration method was the best, followed by the lecture and experiment method.

Conclusion

Overall, the lecture and demonstration method was the most effective in enhancing student understanding of the material. The lecture and experiment method was also effective, but required more time and resources.

Virtual Reality (VR) technology as an instructional tool in Materials Science and Engineering classroom

Jeskeeta Bara, Robert Webb, Ha'sheenah Richardson
Materials Science and Engineering, Physics and Astronomy, Center for Teaching Excellence, Texas A&M University, TX

Background

Student challenges:
- Difficulty understanding 3D concepts (e.g., crystal structures, dislocation movement)
- Difficulty visualizing and imagining molecular structure
- Difficulty understanding the relationship between different concepts

Research questions:
- Can VR technology enhance students' understanding of complex 3D concepts in materials science?
- Can VR technology be used to improve student engagement and retention in the classroom?

Study Design and Methodology

- Lab-based lectures
- VR-based lectures
- Pre- and post-tests
- Video recordings

Conclusion

- VR technology was effective in enhancing student understanding of complex 3D concepts
- Students reported increased engagement and motivation
- Further research is needed to determine the long-term benefits of VR technology in the classroom
Program Review and Assessment: CTE Graduate Student Professional Development in Teaching Programming Academic Year 2019-2020

Recommendations

Professional development experiences bridge the gap between discipline-based graduate coursework and the professional workforce. Complementing academic training, professional development experiences provide doctoral students with opportunities to develop core competencies and transferable skills needed for career success upon graduation. Experiences in teaching afforded by the Graduate Student Professional Development in Teaching (GSPDT) Programs may be particularly important for doctoral students who desire academic faculty positions. Based on the 2019-2020 program review the following recommendations are being made to improve the implementation of GSPDT programs.

Teaching Assistant Institute: The Institute should continue to be facilitated on multiple campuses, TAMU, TAMU-Galveston, and the School of Law, to address the professional development needs of Teaching Assistants, or graduate students serving in peer-mentor roles. Given the increased use of reliable cloud platforms for video and audio conferencing, chat, and webinars, facilitation of the Institute on the Qatar campus may be possible. It is recommended that program leaders seek to understand the professional development needs of Teaching Assistants at TAMU-Qatar in order to determine if facilitation of the Institute at TAMU Qatar would enhance classroom instruction. It is recommended that questions assessing new Teaching Assistants’ level of confidence pertaining to applying (1) active learning strategies; (2) diversity and inclusion principles in online/virtual and face-to-face settings be added to the post event survey. While the overall evaluation of the Teaching Assistant Institute is good steps should be taken to ensure that the quality of Institute is not only upheld but increased. Less than 1/3 of new Teaching Assistants reported having been exposed to material presented at TAI; however, it is recommended that the post survey be used to understand (1) what aspects of the TAI curriculum are repeated (2) where the information was first presented, and (3) whether or not this repetition is beneficial to the professional development of new Teaching Assistants.

Academy for Future Faculty: The Academy for Future Faculty offers a variety of seminars, workshops, and activities supporting professional development in teaching. While enrollment in the AFF Certificate Program remains high and 15% of participants complete the program early, within one year, it is recommended program leaders take steps to increase 2-year graduate rates. Program leaders should also continue to track members of the 2018 participant cohort to understand 3-year graduation rates.
Program Review and Assessment: CTE Graduate Student Professional Development in Teaching Programming Academic Year 2019-2020

Recommendations

Graduate Student Professional Development in Teaching Workshop Series: The GSPDT workshop series in combination with the Academy for Future Faculty provided over 35 professional development opportunities ranging in duration from 60 minutes to 90 minutes in AY 2019-2020. It is recommended that the variety of topics discussed during the series continue to address the most relevant pedagogical needs of graduate students, professional students, and postdoctoral research associates. Workshops on effective online learning should be added to the series in response to the COVID-19 pandemic and institutional initiatives such as Keep Teaching (https://keepteaching.tamu.edu/) and Keep Learning (https://provost.tamu.edu/keep-learning). The workshop series should continue to be offered to students at TAMU-Galveston through online platforms such as ZOOM Video Conferencing.

Graduate Teaching Consultant: The program supports the professional development of Teaching assistants, and includes opportunities that support enhanced teaching experiences. It is recommended that programs policies and procedures for signing up for client request be reviewed for aspects of equity. It is also recommended that additional social and community building opportunities be added to the program’s existing framework. While 93.8% of Graduate Teaching Consultants believe the GTC program has helped them to develop a deeper understanding of research-based teaching practice, program leaders should take steps to maintain and enhance the quality of the program.

Teaching-as-Research: Teaching-as-Research is the capstone Center for the Integration of Research, Teaching, and Learning (CIRTL) program and affords participants the Scholar-level certificate. It is recommended that additional marketing practices be implemented to increase the number of participants to 15 or 20 students.
Contributors

Program Review and Assessment Support Staff,
2019-2020

Director
Debra Fowler

Assistant Director
Ra’sheedah Richardson

Administrative Staff
Sherri MacWillie, Project Manager II

Graduate Assistants and Interns
Jaskirat Batra, MSEN
Cole Tenner, MGMT
Carly Pappert, RPTS
Caroline Knauth, ACCT
Keith Graham, TLAC

We welcome your feedback.
https://tamu.qualtrics.com/jfe/form/SV_baezelD5XglyNr7