

UGTS pre-Survey

Introduction and Purpose

My name is Sara Tischhauser. I am a graduate student working with the Director of Undergraduate Chemistry, Anne Baranger, and MaryAnn Robak and Peter Marsden in the College of Chemistry at the University of California, Berkeley. We are planning to conduct a research study, which we invite you to take part in.

We are inviting you to participate in this study because you are a Teacher Scholar. The purpose of this research is to understand the contributions of the Teacher-Scholar program to our curriculum to not only improve chemistry education at UC Berkeley but also to improve chemistry education at other institutions by sharing our results with the chemical education community.

Procedures

If you agree to be in this study, you will be asked to do the following:

Complete two short online surveys. The survey will include questions about your experiences in the teacher scholar program. They will each take approximately 10-15 minutes to complete. The surveys will be administered at the beginning and end of the semester.

Allow us (the researchers) access to materials you submit as part of the course (assignments, in-class activities, quizzes, etc.). Your work will be collected by your instructor and reviewed by members of the Chemical Education group at UC Berkeley. This is not extra class work, but material that all Teacher-Scholars will complete.

Be included in observations or audiotaping of laboratory or discussion sections. Observations will take place 3 times during the semester. The goal of these observations or audiotaping is to investigate the interactions of the Teacher-Scholars with students and the graduate student instructor (GSI). Only groups for which all members have consented will be included in observations or audiotaping. Observation or audiotaping of laboratory sections will not exceed 20 hours per semester, and observation of discussion sections will not exceed 5 hours per semester.

Allow us to include in our study survey **and** interview data about the experiences of the students and the GSI in your section with the Teacher-Scholar program. This will include asking the GSI and students in your section to discuss their interactions with you because we are interested in understanding the perceptions of the students and GSI of the interactions between the students, Teacher-Scholar, and GSI.

Also, we will conduct interviews with Teacher-Scholars at the end of the semester. The interview is to ask Teacher-Scholars about their experiences in the program and/or to evaluate understanding of course material. The interview will be conducted on the UC Berkeley Campus and will be recorded with the student's permission. The interview will take up to one hour.

Benefits

Although there is no direct benefit to you from participating in this research, we hope that this research will benefit our program and other similar programs in other departments.

Risks/Discomforts

- You are free to decline to answer any questions you don't wish to, or to stop participating at any time.
- Breach of confidentiality: As with all research, there is a chance that confidentiality could be compromised; however, we are taking precautions to minimize this risk.

Confidentiality

Your study data will be handled as confidentially as possible. If results of this study are published or presented, individual names and other personally identifiable information will not be used. The data in the on-line survey is encrypted. To minimize the risks to confidentiality, we will assign you a unique participant ID number that will be used to replace identifying information, such as your name, in your data. Your data (video included) will be stored in a locked cabinet in our lab. The list that links participant numbers to identity will be kept in a locked cabinet separate from study data. All electronic data, including the list that links participant numbers to identity, will be encrypted. If you are currently a student in a course of one of the investigators, including Anne Baranger, Peter Marsden, and MaryAnn Robak, the instructor will not have access to the data until after final grades are assigned. At that time, the graduate student researcher, Sara Tischhauser, will remove all identifying information, including name and SID, from the data before sharing with the instructor.

If you are currently a student in a course of one of the investigators, including Anne Baranger, Peter Marsden, and MaryAnn Robak, the instructor will not have access to the data until after final grades are assigned. At that time, the graduate student researcher, Sara Tischhauser, will remove all identifying information, including name and SID, from the data before sharing with the instructor.

We will be collecting data for this study over a 3-year time period. When the research is completed, we may save the study data for use in future research done by ourselves or others. We will retain these records for up to 6 years after the study is over. The same measures described above will be taken to protect confidentiality of this study data.

Compensation

You will not be compensated for your participation in the study.

Rights

Participation in research is completely voluntary. You have the right to decline to participate or to withdraw at any point in this study without penalty or loss of benefits to which you are otherwise entitled; your standing in the class or school will in no way be affected by your decision.

Questions

If you have any questions or concerns about this study, you may contact the principle investigator, Anne Baranger, at abaranger@berkeley.edu or 642-0336 or the graduate student researcher (GSR) Sara Tischhauser at tischhauser@berkeley.edu. If you have any questions or concerns about your rights and treatment as a research subject, you may contact the office of UC Berkeley's Committee for the Protection of Human Subjects, at 510-642-7461 or subjects@berkeley.edu.

* 1. If you agree to take part in the research, please indicate what you agree to, using the buttons below.

	Yes	No
I agree to have my survey responses and course materials included in research.	☐	☐
I agree to have the survey and interview responses of the GSI and students in my section included in research.	☐	☐
I agree to participate in individual interviews.	☐	☐

2. What is your name?

3. What is your student ID number?

4. What course have you been assigned to teach this semester in the Teacher-Scholars program?

5. Have you participated in the Teacher-Scholars program in the past?

If so, how many semesters?

6. What teaching experiences did you have before participating in the Teacher-Scholars program? If you did not have any teaching experience, answer "none".

7. What do you hope to gain personally from your participation in the Teacher-Scholars program?

8. What is your major?

9. What is your career goal?

10. Rate your comfort level with each of the following factors before you begin your duties as a Teacher-Scholar.

	Very Comfortable	Mostly Comfortable	A Little Comfortable	Not Comfortable At All
Understanding of chemistry content in the course you have been assigned to teach	☐	☐	☐	☐
Ability to explain chemistry concepts and techniques	☐	☐	☐	☐
Ability to design good questions	☐	☐	☐	☐
Ability to guide students through a problem without giving away the answer	☐	☐	☐	☐
Confidence in interpersonal skills	☐	☐	☐	☐
Feeling of belonging at Berkeley	☐	☐	☐	☐
Making friends with other science students	☐	☐	☐	☐
Other (please specify)	☐	☐	☐	☐

Other (please specify)

11. Describe the typical interactions you had with your GSI when you were a student in the class that you have now been assigned to teach.

12. Describe the typical interactions you had with your classmates when you were a student in the class that you have now been assigned to teach.

13. Have you ever been a student in a course section that had a Teacher-Scholar?

- ☐ Yes
- ☐ No
- ☐ I don't remember

If you answered yes, describe your interactions with the Teacher-Scholar in your section.

14. What topics are you interested in learning about in the Teacher-Scholar evening sessions this semester?

15. If you were a Teacher-Scholar in a past semester, which topics are you interested in repeating? Which topics would you prefer we skip this semester?

UGTS post-Survey

1. What is your name?

2. Which course did you teach this semester?

☐ 1A

☐ 1A Section 4

☐ 1AL

☐ 3B

☐ 4A

☐ 112A

☐ 3A

3. What teaching experiences did you have before participating in the Teacher-Scholar program? If you did not have any teaching experience, answer "none".

4. What was your major at the beginning of the semester?

5. What is your major now?

6. If your major changed, please describe the reasons for this change.

7. What is your career goal? Has this changed since the beginning of the semester?

8. Please rate your comfort level with each of the following factors now that you have completed your semester as a Teacher-Scholar.

Comfort Level

Understanding of
chemistry content in the
course you taught

Ability to explain
chemistry concepts and
techniques

Ability to design good
questions

Ability to guide students
through a problem
without giving away the
answer

Confidence in
interpersonal skills

Feeling of belonging at
Berkeley

Making friends with other
science students

Other

Other (please specify)

9. Which factor from question 8 do you feel was improved the most over the course of the semester?
Explain how.

10. How did you prepare for each week's laboratory session? Choose all that apply.

- ☐ I attended the Wednesday evening session.
- ☐ I read the pre-lab before coming to lab.
- ☐ I read the entire lab procedure before coming to lab.
- ☐ I attended the weekly GSI meeting for the course.
- ☐ I talked to the GSI in charge of my section before coming to lab.
- ☐ I attended lab lecture for the course in which I was a Teacher-Scholar.
- ☐ I completed practice problems about laboratory concepts before coming to lab.

Other (please specify)

11. What was the most helpful aspect of the weekly meetings (Wednesday night meetings)?

12. What was the least helpful aspect of the weekly meetings?

13. What additional topics do you wish had been covered in the weekly meetings?

14. Which of the following best describes your attendance in the Wednesday evening meetings this semester?

- ☐ I attended all of the evening meetings this semester.
- ☐ I had a couple review sessions/commitments that I needed to attend, so I had to miss 1-2 evening sessions this semester, but made it to the rest!
- ☐ This semester got kind of busy and I was only able to make it to about half of the Wednesday evening meetings.
- ☐ Due to a scheduling conflict, I couldn't attend the evening sessions this semester.

15. Which of the following did you do as a Teacher-Scholar this semester?

- ☐ Provided Information
- ☐ Acted as a Role Model
- ☐ Graded Student Work
- ☐ Facilitated Discussion
- ☐ Created Course Resources (someone who creates worksheets, study guides, practice problems, etc.)
- ☐ Planned lab activities and the way the laboratory runs
- ☐ Monitored Safety Procedures in Lab
- ☐ Supervised the use of class instruments
- ☐ Other (please specify)

16. Of the activities listed above, how appropriate do you think each is for a Teacher-Scholar?

	Not appropriate at all for a Teacher-Scholar to do	Sometimes appropriate for a Teacher-Scholar to do	Usually appropriate for a Teacher-Scholar to do	Very appropriate for a Teacher-Scholar to do
Providing Information	☐	☐	☐	☐
Acting as a Role Model	☐	☐	☐	☐
Grading Student Work	☐	☐	☐	☐
Facilitating Discussion	☐	☐	☐	☐
Creating Course Resources(worksheets, study guides, practice problems, etc.)	☐	☐	☐	☐
Planning lab activities and the way the laboratory runs	☐	☐	☐	☐
Monitoring Safety Procedures in Lab	☐	☐	☐	☐
Supervising the use of class instruments	☐	☐	☐	☐

Other (please specify)

17. Describe the types of interactions you frequently had with the GSI in charge of your section.

18. This semester, I helped my students to improve their understanding of laboratory equipment and procedure.

- ☐ Strongly Agree
- ☐ Slightly Agree
- ☐ Slightly Disagree
- ☐ Strongly Disagree

Comments?

19. This semester, I helped my students to improve their understanding of lecture material.

- ☐ Strongly Agree
- ☐ Slightly Agree
- ☐ Slightly Disagree
- ☐ Strongly Disagree

Comments?

20. This semester, I helped my students improve their understanding of the chemistry concepts needed to accomplish the laboratory experiments.

- ☐ Strongly Agree
- ☐ Slightly Agree
- ☐ Slightly Disagree
- ☐ Strongly Disagree

Comments?

21. How did you influence your students' experience in the lab? For example, did you make your students feel comfortable asking questions? Did you welcome questions? Did you make your students feel confident in their chemistry abilities?

22. Please indicate how frequently you were asked the following types of questions during your lab sessions.

	Never	1-2 times per lab session	5-10 times per lab session	Greater than 10 times per lab session
Content Questions	☐	☐	☐	☐
Equipment Questions	☐	☐	☐	☐
Procedure Questions	☐	☐	☐	☐
Grading Questions	☐	☐	☐	☐
Life Questions (where to live, which classes to take, which professors to take classes with, research, clubs, etc.)	☐	☐	☐	☐
Other Questions	☐	☐	☐	☐

23. Please rate the degree to which you agree with the following.

	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree
I felt comfortable in my role as a Teacher-Scholar.	☐	☐	☐	☐
I believe that students benefitted from my work as a Teacher-Scholar.	☐	☐	☐	☐
I believe that my understanding of the chemistry content covered in the lab I taught has increased as a result of my work as a Teacher-Scholar.	☐	☐	☐	☐
I believe that my understanding of effective teaching methods has improved as a result of the evening sessions.	☐	☐	☐	☐
If I had the choice, I would participate as a Teacher-Scholar again in future semesters.	☐	☐	☐	☐
Every undergraduate should learn how to teach.	☐	☐	☐	☐

24. What was the highlight of your experience as a Teacher-Scholar?

25. What unique contributions does the Teacher-Scholar Program bring to the laboratory?

26. How did the Teacher-Scholar Program contribute to your overall experience at UC Berkeley?

27. How would you modify your role in the laboratory sessions to better serve you as a Teacher-Scholar?

28. Would you recommend the Teacher-Scholar program to a friend who was interested in teaching? Why or why not?

☐ Yes

☐ No

Why or why not?

29. Please provide any general comments you have about the program.

30. What is your ethnicity?

- ☐ American Indian/Alaska Native
- ☐ Chinese/Chinese American
- ☐ Indian/Indian American
- ☐ Pakistani/Pakistani American
- ☐ Japanese/Japanese American
- ☐ Korean/Korean American
- ☐ Filipino/Filipino American
- ☐ Pacific Islander
- ☐ South East Asian
- ☐ Other Asian
- ☐ African American/Black
- ☐ Mexican/Mexican American/Chicano
- ☐ Spanish American/Latino/Latina
- ☐ Middle Eastern
- ☐ White
- ☐ Decline to State

Other (please specify)

31. Please provide your berkeley.edu email address.

GSI Survey

1. What is your name?

2. Which class did you teach this semester?

☐

1AL

☐

1A discussion

☐

1A Section 4

☐

3AL

☐

3BL

☐

4A

☐

112A

3. Did you supervise an Undergraduate Teacher Scholar in your lab section this semester?

(This is an undergraduate student who has previously taken the course, who was assigned to help in your section throughout the semester.)

☐

yes

☐

no

4. What was your Teacher-Scholar's name?

Teacher-Scholar

Teacher-Scholar 2 (if you
had more than one)

Observations about your Teacher-Scholar

5. Please describe the typical interactions that the UGTS had with you:

6. Please describe the typical interactions that the UGTS had with the students in your class:

7. How did your role differ from the role of the Teacher-Scholar?

8. Did your students use you and your Teacher-Scholar in different ways? For example, did you consistently get asked questions about one type of thing, while your Teacher-Scholar consistently got asked questions about something different? Please explain.

9. What is your impression of the UGTS' understanding of the material?

- ☐ Excellent
- ☐ Good
- ☐ Acceptable
- ☐ Poor
- ☐ Unable to Judge

Comments

10. What is your impression of the UGTS' ability to provide accurate explanations to students?

- ☐ Excellent
- ☐ Good
- ☐ Acceptable
- ☐ Poor
- ☐ Unable to Judge

Comments

11. When your Teacher-Scholar is in lab, how prepared are they for lab section?

- ☐ My Teacher-Scholar is always very well prepared for lab.
- ☐ My Teacher-Scholar is prepared most of the time.
- ☐ My Teacher-Scholar is prepared some of the time.
- ☐ My Teacher-Scholar is rarely/never prepared for lab.

12. How often has your Teacher-Scholar missed lab this semester?

- ☐ My Teacher-Scholar has never missed lab.
- ☐ My Teacher-Scholar has missed lab once.
- ☐ My Teacher-Scholar has missed lab a few times.
- ☐ My Teacher-Scholar misses lab frequently.

13. Has your Teacher-Scholar ever missed lab without telling you ahead of time?

- ☐ Yes
- ☐ No

14. If you were teaching the same class again in a future semester, would you want to work with a Teacher-Scholar again?

- ☐ Yes
- ☐ No

Why or why not?

15. Do you have any ideas for additional things the Teacher-Scholar students could plan to do in future semesters that would be helpful in the classroom?

16. What would you suggest be done differently with the Teacher-Scholar program?

17. Do you have any other general comments or suggestions?

Student Survey

Thank you for participating in our survey.

We are interested in learning about your interactions with GSIs and Undergraduate Teacher-Scholars in lab.

We plan to use this information to improve the course for future semesters and also to provide insight into the way students learn and interact with course material when Teacher-Scholars are present in the laboratory setting.

At the end of the survey, you will have the option of entering your student ID number to earn 1 pt of extra credit in Chem 1AL.

1. Was there an Undergraduate Teacher-Scholar (UGTS) in your lab section? (This is an undergraduate student who had previously taken the course and who helped your GSI to teach throughout the semester. You may know this person as a UGSI.)

☐ Yes

☐ No

2. What is your Undergraduate Teacher-Scholar's name?

3. Which of the following did your Undergraduate Teacher-Scholar do this semester?

- ☐ Provided Information
- ☐ Acted as a Role Model
- ☐ Graded Student Work
- ☐ Facilitated Discussion
- ☐ Created Course Resources (worksheets, study guides, practice problems, etc.)
- ☐ Planned lab activities and the way the laboratory runs.
- ☐ Monitored Safety Procedures in Lab
- ☐ Supervised the use of class instruments
- ☐ Other (please specify)

4. How appropriate are the following duties for an Undergraduate Teacher-Scholar?

	Not appropriate at all	Sometimes appropriate	Usually appropriate	Very appropriate
Providing Information	☐	☐	☐	☐
Acting as a Role Model	☐	☐	☐	☐
Grading Student Work	☐	☐	☐	☐
Facilitating Discussion	☐	☐	☐	☐
Creating Course Resources (worksheets, study guides, practice problems, etc.)	☐	☐	☐	☐
Planning lab activities and the way the laboratory runs	☐	☐	☐	☐
Monitoring Safety Procedures in Lab	☐	☐	☐	☐
Supervising the use of class instruments	☐	☐	☐	☐

Other (please specify)

5. How did your Undergraduate Teacher-Scholar's role differ from your GSI's role?

- ☐ My Undergraduate Teacher-Scholar's role did not differ from my GSI's role.
- ☐ My Undergraduate Teacher-Scholar did everything that the GSI did with the exception of pre-lab lectures and grading.
- ☐ My Undergraduate Teacher-Scholar had a fundamentally different role than my GSI.

If you said your Undergraduate Teacher-Scholar had a different role than your GSI, please explain how the two differed.

6. This semester, my Undergraduate Teacher-Scholar helped me to improve my understanding of...

- ☐ laboratory equipment and procedure
- ☐ the chemistry concepts necessary to accomplish the laboratory experiment
- ☐ lecture material
- ☐ how to navigate Berkeley as an undergraduate (what classes to take, where to live, how to get involved in research, etc.)

Other (please specify)

7. Please rate the degree to which you agree with the following statements.

	Strongly Agree	Mildly Agree	Mildly Disagree	Strongly Disagree
I believe my Undergraduate Teacher-Scholar performed well in his/her role this semester.	☐	☐	☐	☐
I think that Undergraduate Teacher-Scholars in general are beneficial to have in the lab.	☐	☐	☐	☐
I believe that Undergraduate Teacher-Scholars in general serve as effective teachers.	☐	☐	☐	☐

8. Think of your experience with your Undergraduate Teacher-Scholar and GSI in lab this semester. Who's teaching do you feel you learned the most from?

GSI only	GSI mostly	Undergraduate Teacher-Scholar mostly	Undergraduate Teacher-Scholar only
☐	☐	☐	☐

Explain your answer.

9. Please rate your own personal priorities in lab this semester. There is no "better" answer than another. We want to learn what laboratory students value. Please answer as honestly as possible.

	This is my highest priority in lab.	This is a high priority for me in lab.	This is a moderately high priority for me in lab.	This is my lowest priority in lab.
I want to get finished with lab as fast as possible.	☐	☐	☐	☐
I want to learn all of the concepts related to the lab experiment.	☐	☐	☐	☐
I want to get a good grade in lab.	☐	☐	☐	☐
I want to obtain the expected experimental results (high percent yield, etc.).	☐	☐	☐	☐

10. What unique contributions does the Undergraduate Teacher-Scholar Program bring to the laboratory?

11. How could we modify the Undergraduate Teacher-Scholar Program to better serve you in lab?

12. Would you recommend that we continue the Undergraduate Teacher-Scholar program?

☐ Yes

☐ No

Why or why not?

13. Are there any other comments you have about the Undergraduate Teacher-Scholar program?

14. Please indicate the order in which you would approach the following people (GSI, Undergraduate Teacher-Scholar, Peer) to ask the following types of questions.

	GSI	Undergraduate Teacher-Scholar	Peer
Content Questions			
Equipment Questions			
Procedure Questions			
Grading Questions			
Life Questions (where to study, where to live, questions about your major, career path, research, clubs, etc.)			
Other questions			

Do you have any comments?

15. This semester, my GSI helped me to improve my understanding of...

- ☐ laboratory equipment and procedure
- ☐ the chemistry concepts necessary to accomplish the laboratory experiment
- ☐ lecture material
- ☐ how to navigate Berkeley as an undergraduate (what classes to take, where to live, how to get involved in research, etc.)

Other (please specify)

16. If you asked your Undergraduate Teacher-Scholar a question in lab, how satisfied were you with the quality and accuracy of the answer you were given?

- ☐ Not at all satisfied
- ☐ A little satisfied
- ☐ Moderately satisfied
- ☐ Extremely satisfied

17. If you asked your GSI a question in lab, how satisfied were you with the quality and accuracy of the answer you were given?

- ☐ Not at all satisfied
- ☐ A little satisfied
- ☐ Moderately satisfied
- ☐ Extremely satisfied

Thank you for completing our survey.

18. To earn 1 pt of extra credit in Chem 1AL, please enter your student ID number below.

Focus Group and Interview Questions

UGTS Focus Group Questions

What unique contributions does the UGTS program provide?

How has the UGTS program influenced your experiences at Berkeley?

How did your role differ from that of the GSI? Please elaborate.

What suggestions do you have for improving the program?

Interview questions for students enrolled in a lab section with a Teacher-Scholar

What are your thoughts on the UGTS program?

What unique contributions does the UGTS program provide?

Did your GSI and UGTS have different roles? Please elaborate.

What suggestions do you have for improving the program?

Interview questions for GSIs with a Teacher-Scholar

What are your thoughts on the UGTS program?

Did you and your UGTS have different roles? Please elaborate.

What suggestions do you have for improving the program?

Would you want to teach with a UGTS again?